

The 18th International Congress of Oriental Medicine 2016

第 18 回国際東洋医学会学術大会



**April 15(Fri)-17(Sun), 2016
Okinawa Convention Center
Ginowan, Okinawa, Japan**



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The 18th International Congress of Oriental Medicine 2016

第 18 回国際東洋医学会学術大会



April 15(Fri)-17(Sun), 2016

Date: (4-3-1 Mashiki, Ginowan

Venue: Okinawa Convention Center

City Okinawa 901-2224, Japan)

TEL : +81(0)98-898-3000 /

FAX : +81(0)98-898-2202

Organizers: Japan Chapter of International Society of Oriental Medicine (ISOM)

Patronage: Japan Society for Oriental Medicine (JSOM)

Japan Society of Acupuncture and Moxibustion (JSAM)

Medical and Pharmaceutical Society for WAKAN-YAKU

Co-hosting: Japanese Society of Pharmacognosy (JSP)

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Welcome Remarks

As President of International Society of Oriental Medicine (ISOM), it is my great pleasure to hold 18th ICOM in Okinawa, in Japan with successfully. I am very glad to see colleagues in the world and to talk topics of traditional medicine each other.

And I have known highly efforts of the Organizing Committee of the Congress as well as the members of ISOM Japan Chapter, who have spent these two years making preparations for this highly refined congress. I would like to express my sincere thanks for them.

Successive ICOMs have boosted the exchange of academic information about Oriental medicine across the international borders year after year. This development has been spurred, in particular, by the emergence of young scientists, physicians, pharmacists, acupuncturists who are practicing traditional medicine. In addition, our chapters in Japan, South Korea and Taiwan have been strengthened structurally. All these relationships and friendships promise future development.

Natural medicines and the medicinal theory that had originated in ancient China land have spread throughout East Asia over a long period. And furthermore, those have evolved uniquely in each country and region to contribute the public health as their traditional medicine.

Our sincere hope is the traditional medicine will contribute more to the public health and the happiness of people throughout the world. We wish to achieve this by exchanging the useful information through this congress.

I wish to express my hope that this Society will continue to develop and grow traditional medicine in the future.



Dr. Keigo Nakata
President of International Society of Oriental Medicine (ISOM)

Welcome Address

The 18th International Congress of Oriental Medicine (ICOM) which based on the main topics "Integration of traditional and modern medicine" will be held in Okinawa where gentle wind blows from the beautiful sea. I am very pleased to welcome you to the ICOM. We are ready to invite many excellent researchers and clinicians from the world. I'm very much looking forward to seeing you in tropical island, and I am convinced that your participation make it become a fruitful congress.



Dr. Shuji Ohno,
The President of 18th ICOM

We have the great pleasure to invite all of you to the 18th International Congress of Oriental Medicine (ICOM) to be held in Okinawa, Japan. We also believe you will be able to enjoy Okinawa where there are many cultural and exciting places worth visiting, for example, Okinawa Churaumi Aquarium, Shuri Castle, Karate, Longevity meal, etc. We look forward to meeting and working with all of you at ICOM.



Dr. Hirofumi Tomori
Chairman of Organizing Committee of the 18th ICOM

Organizing Committee

President of the 18th ICOM

Shuji Ohno, M.D. Ph.D.

(Director of Ohno Clinic)

Vice President of the 18th ICOM

Hiromichi Yasui, M.D.

(President of Japan Chapter of ISOM, Director of Yasui Clinic)

Executive Adviser

Keigo Nakata, M.D.

(President of ISOM, Director of Seikoen Hosono Clinic)

Chairman of the Executive Committee

Hirofumi Tomori, M.D.

(Chief of Surgery Department, Naha City Hospital)

Chairman of Program Committee

Mosaburo Kainuma, M.D. Ph.D.

(Associate Professor, Community Medicine Education Unit,
Graduate School of Medical Sciences, Kyushu University)

Secretary General

Toshiaki Makino, Pharmacist, Ph.D.

(Professor, Department of Pharmacognosy,
Graduate School of Pharmaceutical Sciences, Nagoya City University)

Committee Members All the names are listed in alphabetical order.

Masayuki Kashima, M.D.

(Vice Director, Department of General Internal
Medicine, Japanese Red Cross Kumamoto Hospital)

Zuimei Miyazaki, M.D., Ph.D., FCCP, FASA

(Director of Miyazaki Clinic Shiohama Onmeikai)

Yoshiharu Motoo, M.D., Ph.D. FACP

(Professor, Department of Medical Oncology, Kanazawa Medical University)

Masanori Takashi, Pharmacist, L.Ac.

(Office of Acupuncture and moxibustion, Tokai University Oiso Hospital)

Rika Tawata, M.D.

(Gynecologist of Naoko women's clinic)

Daisuke Watanabe, L.Ac., Ph.D.

(Lecturer, Department of Acupuncture and
Moxibustion, Okinawa College of Integrative Medicine)

Hitoshi Yamashita, L.Ac., Ph.D.

(Professor, Acupuncture Information Center
Morinomiya University of Medical Sciences)

Makoto Yoshitomi, M.D.

(Director of Yoshitomi Fukuyoudou Clinic)

Adviser All the names are listed in alphabetical order.

Kenichi Takahashi, Ph.D.

(President of Okinawa College of Integrative Medicine)

Yasuo Nakahara, M.D.

(Director of Nakahara Kampo Clinic)

Cholsong Yang, M.D.

(Director of Yan Herb Clinic)

Congress Information

1. Venue

Okinawa Convention Center

Conference Building A, Conference Building B, Conference Room C
4-3-1 Mashiki, Ginowan City Okinawa 901-2224, Japan
TEL: +81(0)98-898-3000 / FAX: +81(0)98-898-2202
URL: <http://www.oki-conven.jp/en/facilities/institution.html>

2. Web Page

<http://www.icom-okinawa2016.com>

3. Office

Corporate Games Japan Ltd.

1-12-17-1F, Kanagusuku, Naha 901-0155, Japan

TEL: +81(0)98-859-2580 / FAX: +81(0)98-859-2581

E-mail: 18thICOM@corporategames.jp

Japan Chapter of International Society of Oriental Medicine (ISOM)

Department of Pharmacogony, Graduate School of Pharmaceutical
Sciences, Nagoya City University

3-1, Tanabe-Dori, Mizuho-ku, Nagoya 4678603, Japan

TEL & FAX: +81(0)52-836-3416

E-mail: icom-japan@phar.nagoya-cu.ac.jp

4. Registration

Within the congress venue, please be sure to wear a name card.

Registration desk

April 15

13:30 to 16:30 pm at Okinawa Convention Center.

18:30 to 19:30 pm at Tubarama (とうばら一ま) in Naha City.

April 16

8:20 to 18:00 pm at Okinawa Convention Center.

April 17

8:20 to 15:00 pm at Okinawa Convention Center.

For the participants already registered by Web:

Please show us the registration number and your name at the counter.

If you are student, you must show your student ID at the front desk.

Registration on site:

Please write your personal information on the registration sheet, and pay 35,000 JPN for general or 6,000 for students at the registration desk.

Cash or credit card (VISA and Master card) is accepted.

General registration includes 'Welcome Party' and 'Gala Party' tickets.

5. General language

Except for Korea, Taiwan, Japan sessions, public lecture for Okinawa's citizens and pharmacists, please talk and discuss in English. For some special lectures conducted in Japanese, we will prepare consecutive interpreting into English.

Important Notice for making slides and posters

All slides and posters should be made in English. However, when you use traditional terms including the name of crude drugs, formulas, diagnosis, or physiology, etc. in Oriental Medicine, please use English or alphabetical terms ACCOMPANIED WITH (漢字, 汉字, Chinese or Japanese characters) in blanket.

Ex. Kidney deficiency (腎虚/肾虚), Tokishakuyakusan/Dangguishaoyaosan/
Danggwijagyagsan (当歸芍藥散/當歸芍藥散/当归芍药散).

It may be helpful for international communication in our society.

6. The First Japan-Germany Joint Symposium on Kampo Medicine and Acupuncture

This symposium is semi. closed event sponsored by Japan Chapter of International Society of Oriental Medicine (ISOM) from 14:00 to 18:00 on Friday, April 15, 2016 in Room A1 of Okinawa Convention Center. Registered attendants of the 18th ICOM can take part in this symposium freely as observers.

7. Welcome Party

Welcome party is held from 19:00 to 21:00 on April 15 at Tubarama (とぅばら一ま). To take part in the party, please show us the Welcome party ticket at the entrance. You can buy ticket on site with 7,000 JPY for general or 5,000 JPY for students.

Tubarama (とぅばら一ま)

URL: <http://tb.jcc.okinawa.net>

2. 7. 25, Makishi, Naha 9000013, Japan

TEL: +81(0)98. 862. 3124

Walk 3 min from Makishi (牧志) station (Yui Rail) along Kokusai. Dori (国際通り).

Walk 16 min from Kencho. mae (県庁前) station (Yui Rail) along Kokusai. Dori.

General Registration includes Welcome Party ticket but **NOT** any transportation fees from/to Welcome Party venue (Tubarama).

Participants of the First Japan. Germany Joint Symposium on Kampo Medicine and Acupuncture at Okinawa Convention Center are advised to make your way from to Tubarama on own by using public transportation.

Taxi: about 2,200 JPN for about 25 min. Get off at **Kokusai Dori near Makishi Station**.

Public bus: 480 JPN by No. 23. Get on the bus at 17:42 pm at Mashiki (真志喜) Bus Stop

(p. 11) and get off at 18:58 at Makishi (牧志) bus stop.

For Invited Speakers, Shuttle bus leaves from Convention Center at 18:15

to Kokusai. Dori, and leaves from Kokusai. dori at 21:15 to Laguna Garden Hotel on April 15. When the buses have vacant seats, general participants can get on buses.



Access from Makishi Station to Tubarama (とうばら一ま)

8. Gala Party

Please show us the ticket at the entrance.

18:00 to 20:30 on April 16 at Okinawa Convention Center Room A1

You can buy ticket at the registration desk with 7,000 JPY for general or 5,000 JPY for students.

9. Cloak

Cloak is open from 8:30 to 20:00 on April 16, and from 8:30 to 17:00 on April 17 at the registration desk in Okinawa Convention Center. Valuables can not be entrusted.

10. Calling

We can not call persons in all convention venues and rooms by announcement or slides.
You can use message board near the registration desk.

11. Luncheon Seminar

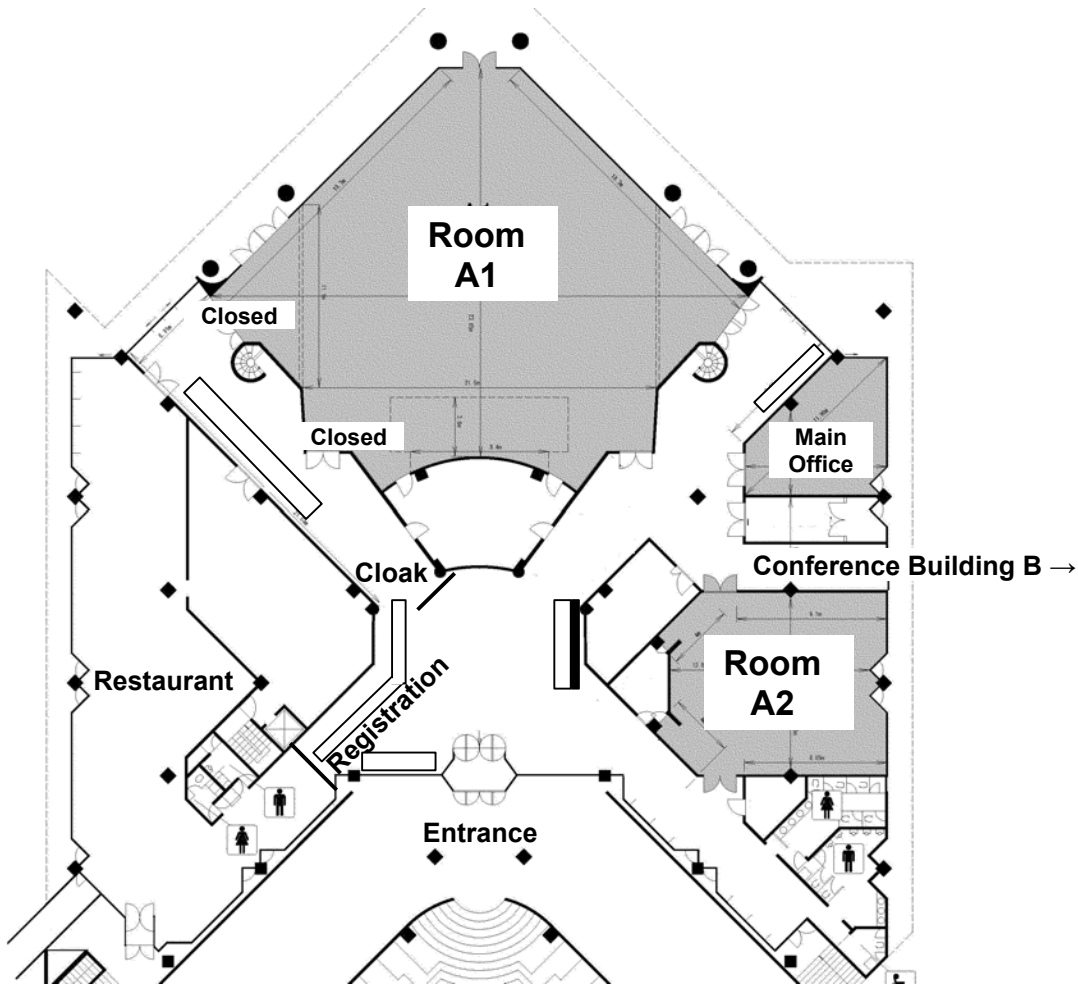
We will serve lunch box at Lunch on Seminar held on April 16 and 17 in Room A1. Please note that the number of lunch box is limited. The ticket of the seminar is served from 8:30 at the registration desk on each April 16 and 17. This ticket is limited to 1 ticket per person.

The serving will end when all the ticket has been served.

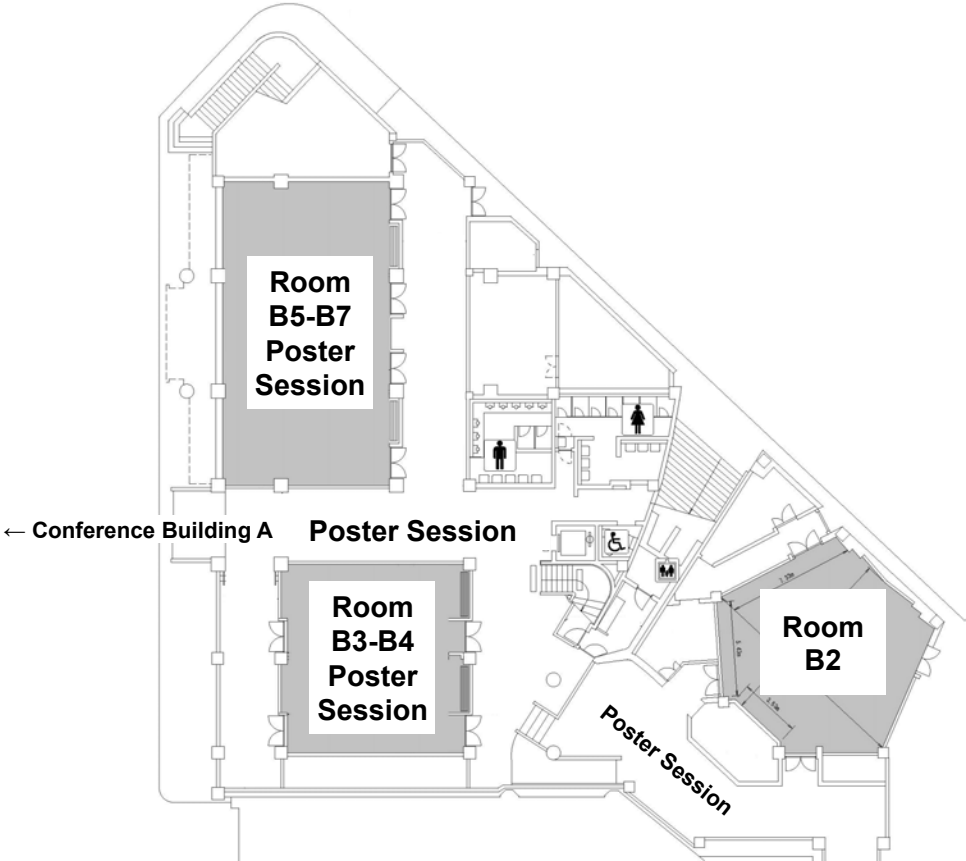
12. Okinawa Convention Center



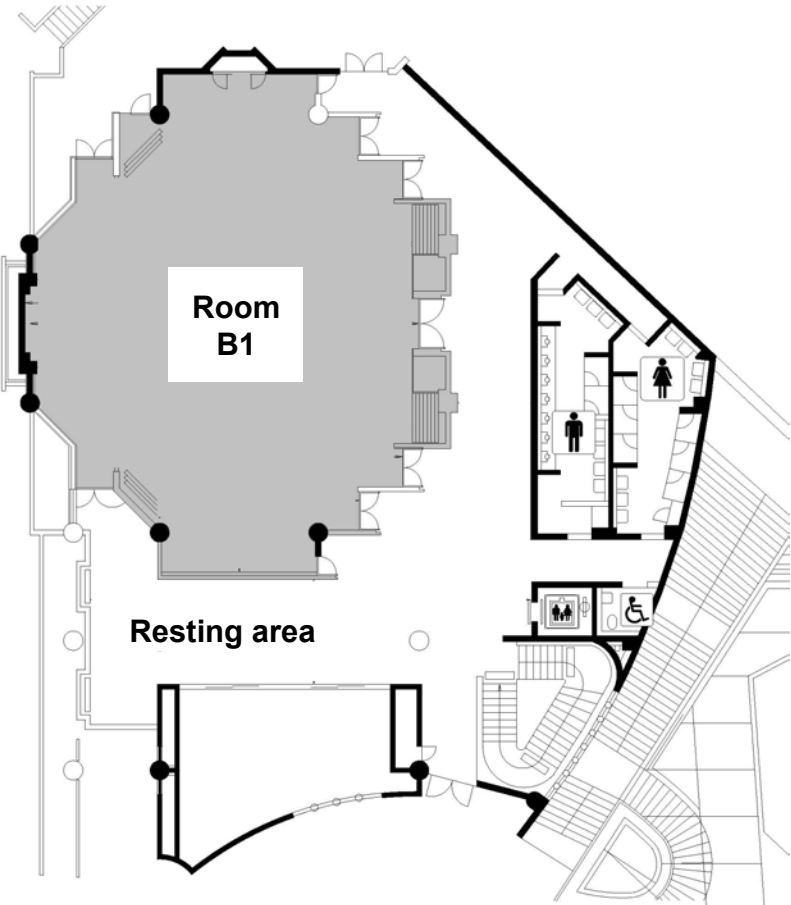
Conference Building A



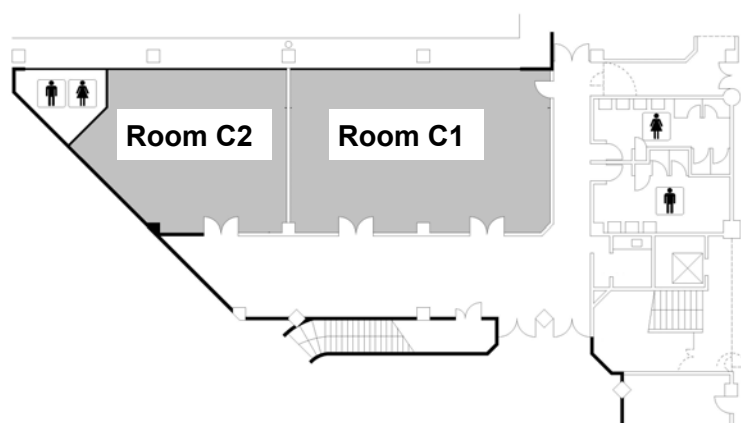
Conference Building B
1st Floor



2nd Floor



Conference Building C



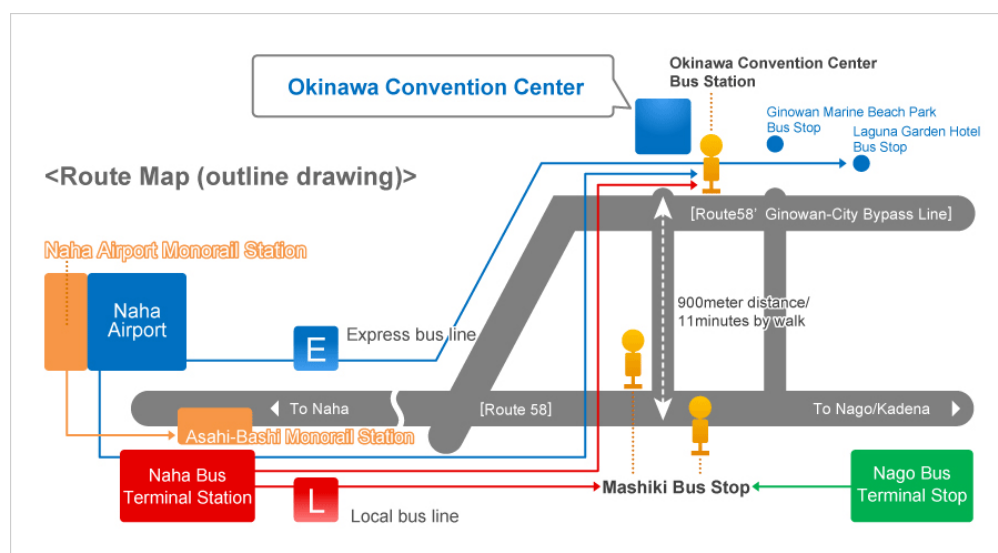
Transportation

Please check <http://www.oki-conven.jp/en/mapsanddirections.html>

To Okinawa:

Direct flight from most of cities in Japan, Taipei, Seoul, Busan, Shanghai, Beijing and Hong Kong.

From Okinawa Airport to the Venue



Bus

Route No 26 (50 minutes) or Route No 99 (70 minutes) from Naha International Airport (Bus Station No. 3) to Okinawa Convention Center Bus Stop. Fare: 570 JPN.

Time Table (Domestic Gate Bus Stop)

No. 26: Friday 15:10, Saturday and Sunday 10:25, 11:25, 12:55, 14:15, 15:45.

No. 99: Friday 12:10, 12:50, 13:35, 14:10, 14:50, 15:20, 15:50, 16:20

Saturday and Sunday 8:15, 9:00, 9:50, 10:35, 11:05, 11:40, 12:25, 13:05, 13:55, 14:35, 15:20, 15:55, 16:35

At at International Gate Bus stop, buses leave 1 - 2 min after the Domestic Gate Bus Stop.

Airport Limousine Bus

Limousine liner bus to Laguna Garden Hotel (40 min). Fare: 600 JPN.

*note: This limousine liner does not stop at the convention center, get off at Laguna Garden Hotel bus stop and walk to the center for 10 min.

Time Table: 11:35, 13:10, 16:00, 17:30 (Domestic); 11:37, 13:12, 16:02, 17:32 (International)

Taxi

About 40 minutes. Fare: about 3,000 JPN.

Vehicle / rental car

Takes about 40 minutes (14 km distance) from Naha Airport.

There's a possibility this information may be modified.

Rental Car is also available: <http://www.otsinternational.jp/otsrentacar/>

From Naha City to the Venue

From Naha Bus Terminal Station to the Okinawa Convention Center Bus Stop.

Route Number: No.26, No.32, No.55 (takes from 40 minute to 60 minutes)

Route Number: No.99 (takes 60 minute), No.112 (takes 50 minute). Fare: 530 JPN.

No. 26 (Asahibashi): Friday 15:20, Saturday and Sunday 10:34, 11:34, 13:05, 14:25, 15:55.

No. 32 (Naha Bus Terminal): Friday and Saturday 7:22, 7:44, 8:20, 9:02, 9:37, 9:52, 10:52, 11:28, 11:52, 13:07, 13:52, 14:58

Sunday 7:32, 7:57, 8:21, 8:47, 9:12, 9:32,

No. 55 (Asahibashi): Friday 11:17, 11:52, 12:17, 12:47, 13:12, 13:47, 14:12, 14:48, 15:23

Saturday and Sunday 7:33, 8:06, 8:43, 9:17, 9:56, 10:30, 11:10, 11:45
12:25, 13:00, 13:45, 14:28, 15:15, 15:56, 16:38

No. 99 (Asahibashi): Friday 11:35, 12:20, 13:00, 13:45, 14:20, 15:00, 15:30, 16:00

Saturday and Sunday 7:10, 7:40, 8:24, 9:09, 9:59, 10:44, 11:14, 11:49,
12:34, 13:15, 14:05, 14:45, 15:30, 16:05

No. 112 (Naha Bus Terminal): Friday 10:20, 15:50, 16:35.

Saturday and Sunday 6:45, 9:05, 15:50

From Naha Bus Terminal Station to the Mashiki (真志喜) Bus Stop

Route Number: No.20, No.77, No.120 (takes from 45 minute)

Route Number: No.23, No.28, No.29, No.63 (takes from 35 minute)

Route Number: No.31 (takes from 50 minute). Fare: 530 JPN.

No. 20 (Naha Bus Terminal): Friday, 7:15, 7:42, 8:15, Saturday and Sunday 7:15, 7:42, 8:15

No. 23 (Naha Bus Terminal): Friday 11:30, 11:50, 12:23, 12:36, 13:05, 13:24, 13:48, 14:15, 14:28, 14:54, 15:20, 15:32, 15:44, 15:56, 16:20. Saturday and Sunday, 7:45, 8:05, 8:25, 9:05, 9:45, 10:25, 11:05, 11:20, 12:10, 12:35, 13:15, 14:15, 14:35, 15:20, 15:45

No. 28 (Naha Bus Terminal): Friday 12:00, 12:17, 12:27, 12:52, 13:07, 13:17, 14:07, 14:22, 14:32, 15:02, 15:17, 15:27, 15:39, 16:05. Saturday and Sunday 7:30, 7:45, 8:55, 9:20, 10:00, 10:20, 11:30, 12:10, 12:47, 13:05, 14:10, 14:50, 15:05, 15:30, 15:45, 16:50

No. 29 (Naha Bus Terminal): Friday 12:07, 16:35, 17:27, 18:20. Saturday and Sunday 7:17, 11:50, 13:50, 16:15

No. 31 (Naha Bus Terminal): Friday 11:40, 12:05, 12:30, 12:55, 13:20, 13:45, 14:10, 14:35, Saturday, 7:30, 8:00, 8:30, 9:00, 9:30, 9:55, 10:10, 10:30, 11:00, 11:25, 11:50, 12:20, 12:50, 13:20, 13:55, 14:25, 14:50, 15:10, 15:30, 15:50
Sunday, from 7 to 15, every hour, 05 and 35 min.

No. 63 (Naha Bus Terminal): Friday 12:10, 13:20, 14:00, 14:45.
Saturday and Sunday 8:50, 9:20, 10:00, 10:40, 11:30, 13:10, 13:55,

No. 77 (Naha Bus Terminal): Friday and Saturday 7:20, 8:55, 9:20, 10:25, 12:40, 13:10, 13:45, 14:25.
Sunday 7:40, 8:20, 9:00, 9:35, 10:55, 11:35,

No. 120 (Asahibashi): Friday and Saturday, 8:57, 9:17, 9:37, 10:02, 10:22, 10:47, 11:12, 11:42, 12:12, 12:42, 13:12, 13:42, 14:12, 14:42, 15:12, 15:42
Sunday 8:57, 9:17, 9:37, 10:02, 10:22, 10:47, 11:12, 11:42

From the Venue to Naha City

From Okinawa Convention Center Bus Stop to Naha Bus Terminal Station.

No. 26: Friday 16:54, Saturday and Sunday 14:22, 15:42, 17:17, 18:37.

No. 32: Friday and Saturday 13:57, 14:42, 15:27, 16:07, 16:57.
Sunday 11:22, 12:27, 13:52, 15:02, 16:12, 17:37, 18:37, 19:57.

No. 55: Friday 14:18, 14:48, 15:18, 15:53, 16:28, 17:05, 17:40, 18:15.
Saturday and Sunday 11:17, 11:57, 12:32, 13:17, 13:57, 14:42, 15:22, 16:02, 16:47, 17:32, 18:12, 19:02, 20:07, 21:02.

No. 99: Friday 14:38, 15:18, 15:58, 16:33, 17:10, 17:45, 18:20.
Saturday and Sunday 11:12, 11:57, 12:32, 13:17, 14:02, 14:42, 15:22, 16:07, 16:52, 17:32, 18:12, 18:57, 19:42.

No. 112 (Naha Bus Terminal): Friday 16:23, 17:04, 17:28.
Saturday and Sunday 10:18, 16:16 19:54.

From the Mashiki (真志喜) Bus Stop to Naha Bus Terminal Station

Route Number: No.20, No.77, (takes from 45 minute)

Route Number: No.120 (60 min)

Route Number: No.23, No.28, No.29, No.63 (takes from 35 minutes to 45 min)

Route Number: No.31 (takes from 50 min) Fare: 530 JPN.

Time Table

No. 20: Friday, 19:45, 20:12, 20:57, 21:40, Saturday and Sunday 19:44, 20:11, 20:56, 21:39

No. 23: Friday, 14:40, 14:53, 15:19, 15:31, 15:57, 16:09, 16:27, 16:38, 16:49, 17:00, 17:16, 17:26, 17:38, 17:54, 18:07, 18:53
Saturday and Sunday, 11:11, 12:01, 12:52, 13:18, 14:11, 14:41, 15:31, 15:46, 16:01, 16:17, 16:32, 16:47, 17:04, 17:23, 18:03, 18:48, 19:11, 19:39, 20:04, 20:28, 20:51, 21:14, 21:38

No. 28: Friday 14:08, 14:23, 14:43, 15:29, 15:39, 15:55, 16:05, 16:17, 17:23, 17:37, 17:48, 18:02, 18:25
 Saturday and Sunday 13:10, 13:25, 14:00, 14:15, 14:54, 15:07, 15:56, 16:57, 17:39, 18:04, 18:29, 19:08, 19:26, 19:47, 20:04, 20:33, 21:13, 21:38

No. 29: Friday 11:25, 13:38, 16:50. Saturday and Sunday 16:09

No. 31: Friday 14:52, 15:15, 15:35, 15:54, 16:14, 16:34, 17:03, 17:18, 17:43, 18:01, 18:24
 Saturday, 12:22, 12:59, 13:29, 13:59, 14:34, 15:11, 15:35, 16:03, 16:28, 16:51, 17:16, 17:42, 18:07, 18:28, 18:53, 19:26, 19:56, 20:26, 20:51, 21:17
 Sunday, 13:04, 13:35, 14:05, 14:35, 15:06, 15:35, 16:05, 16:35, 17:05, 17:36, 18:06, 18:37, 19:07, 19:37

No. 63: Friday 11:45, 13:06, 14:51, 15:33, 17:50.
 Saturday and Sunday 14:47, 15:32, 17:27, 18:15, 19:03, 20:09, 20:56

No. 77: Friday 11:27, 13:31, 15:01, 16:50, 18:52.
 Saturday 11:27, 13:31, 14:57, 16:44, 18:41. Sunday (via Kumoji) 11:45, 12:20, 13:00, 13:35, 14:29, 15:04, 16:20, 17:06

No. 120: Friday, 14:39, 15:09, 15:44, 16:17, 16:47, 17:17, 17:46, 18:19.
 Saturday and Sunday, 12:01, 12:31, 13:07, 13:37, 14:09, 14:39, 15:09, 15:43, 16:16, 16:46, 17:16, 17:46, 18:16, 18:46, 19:14

From the Venue to Okinawa Airport

Route No 26 (55 min) or Route No 99 (70 min).

Fare: 570 JPN.

Time Table at Okinawa Convention Center Bus Stop.

No. 26: Saturday and Sunday 14:22, 15:42, 17:17, 18:37.

No. 99: Saturday and Sunday 14:02, 14:42, 15:22, 16:07, 16:52, 17:32, 18:12, 18:57, 19:42,

Airport Limousine Bus

Limousine liner bus from Laguna Garden Hotel (40 min). Fare: 600 JPN.

Time Table at Laguna Garden Hotel: 11:43, 14:28, 15:58

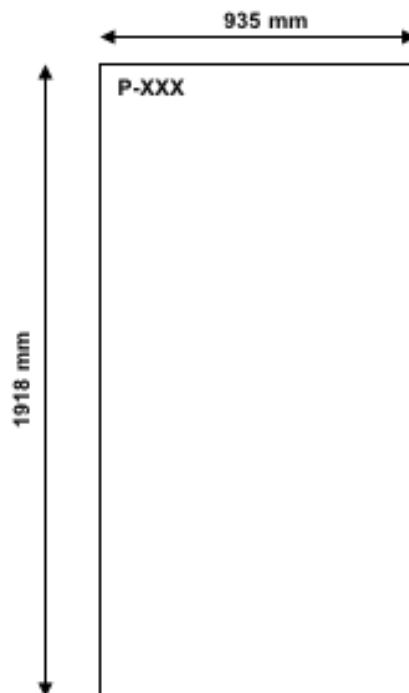
※Bus time table may be changed at April 1, 2016. Please check at the bus stop.

※Okinawa Bus map is shown at http://www.kotsu-okinawa.org/en/map_south.html

General Information for Poster Presenters

Poster Specifications:

Each poster presenter will be provided with a surface on which to mount the poster. Each poster must be within 1918 mm height and 935 mm width. Please drop your poster number at the upper left area (about 15 cm x 15 cm). Supplies to hang posters will be available to you onsite (push pins).



Poster Sessions Schedule:

All posters will be set up at Conference Building B at Okinawa Convention Center. Presenters **MUST** stand in front of their posters during scheduled poster session to discuss with participants. There are no chairpersons in scheduled poster sessions, and you can talk with participants freely.

There will be two separate Poster Session as follows:

- For those who has ODD poster numbers: from 17:00 - 17:30 on April 16.
- For those who has EVEN poster numbers: from 17:30 – 18:00 on April 16.

Set-Up:

Each poster can be set up any time from 8:30 to 10:00 on April 16, and kept it by 14:00 on April 17. You can remove posters after 14:00 on April 17.

Note: If you do not remove your poster after 17:30 on April 17, your poster will be discarded.

Poster Board:

You will be asked to set up your poster on the assigned board as indicated by Assignment Board which will be shown on congress day at Conference Building B.

Important Notice for making poster:

All posters should be made in English. However, when you use traditional terms including the name of crude drugs, formulas, diagnosis, or physiology, etc. in Oriental Medicine, please use English or alphabetical terms ACCOMPANIED WITH (漢字, 汉字, Chinese or Japanese characters) in blanket.

Ex. Kidney deficiency (腎虚/肾虚), Tokishakuyakusan/Dangguishaoyaosan/
Danggwijagyagsan (当歸芍藥散/當歸芍藥散/当归芍药散).

It may be helpful for international communication in our society.

Award of Poster Presentation:

The Poster Award is awarded to the author of meritorious poster presentations in the congress. The Awards will be presented at the Farewell Ceremony.

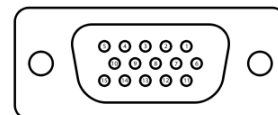
General Information for Invited Oral Presenters

Digital projector:

Organizing Committee will prepare note-type PC computer installed with Windows 7 and PowerPoint 2010 that are connecting to digital projector to conduct the presentation.

If you would like to use our computer, please bring PowerPoint data in USB memory at the congress.

If you would like to use your computer, you can connect to our digital projector via three-row 15-pin DE-15 VGA connector.



In Japan the standard voltage and frequency is 100 V and 60 Hz. The power sockets that are used are of type A. Please prepare the power sockets and corresponding plugs.



At least 1 hr before your presentation (in rest hours), please check-in at the operation desk near the stage in conference room.

Important Notice for making slide shows:

All slides should be made in English. However, when you use traditional terms including the name of crude drugs, formulas, diagnosis, or physiology, etc. in Oriental Medicine, please use English or alphabetical terms ACCOMPANIED WITH (漢字, 汉字, Chinese or Japanese characters) in blanket.

Ex. Kidney deficiency (腎虚/肾虚), Tokishakuyakusan/Dangguishaoyaosan/
Danggwijagyagsan (当歸芍藥散/當歸芍藥散/当归芍药散).

It may be helpful for international communication in our society.

Time Table

April 15, 2016

14:00 - 18:00, Room A1

The First Japan. Germany Joint Symposium on Kampo Medicine and Acupuncture

19:00 - 21:00, at Tubarama (とうばら一ま)

Welcome Party

April 16, 2016

		A1	B1	A2	B2	B3-B7	C1	
A M	9	Invited Lecture 1 Dr. Kunxing Yan	Education Lecture 1 Dr. Klaus Hambrecht Education Lecture 2 Dr. Heidrun Reißwieser-Hewel Education Lecture 3 Dr. Ulrich Eberhard	Korea Session (Sasang Constitutional Medicine Symposium) Dr. Do Young Choi Dr. In-Tae Kim				
	10	Accupuncture Symposium						
	11							Dr. Hitoshi Yamashita Dr. Benjamin Chant
P M	12	Luncheon Seminar Prof. Akio Inui	Education Lecture 4 Dr. Bernd Kostner Education Lecture 5 Dr. Joon-Seok Byun Education Lecture 6 Dr. In-Tae Kim	Korea Session (Korea-Japan Oriental Medical Symposium) Dr. Do Young Choi Dr. Young-shin Kim Dr. Yoshitomi Makoto (In Korean and Japanese)	Taiwan Session Special Lecture Dr. Lin, Jaung Geng	Poster exhibition	The Toumonkai Special Session in Okinawa (In Japanese and Chinese)	
	1	Pharmaceutical Symposium						
	2				Prof. Toshiaki Makino Prof. Ching-Chiung Wang			
	3		General Lecture 1 Dr. Eric Brand	Taiwan Session Dr. Lin, Jaung Geng Dr. Chen, Jing-Ming (In Chinese)				
	4				General Lecture 2 Dr. Shin Takayama			Education lectures for the local pharmacists (in Japanese) Prof. Katsunori Nakamura Prof. Toshiaki Makino
	5		General Lecture 3 Prof. Toshinori Ito	Poster presentation				
	6		Gala Party					

April 17, 2016

		A1	B1	A2	B3-B7	
A M	9	President Lecture Dr. Shuji Ohno	Japan Session Medical Symposium 2 Dr. Keisuke Hagihara Dr. Hideyuki Nakata (In Japanese)		Poster exhibition	
	10	Invited Lecture 2 Dr. Gary Deng				
	11	Invited Lecture 3 Dr. Hyejung Lee				
P M	12	Luncheon Seminar Dr. Sven Schröder				
	1	Special Lecture Dr. Hiroshi Sato				
	2	Medical Symposium Dr. Silke Cameron Dr. Shin Takayama				Education Lecture 7 Prof. Jung-Nien Lai
	3		Public Open Lectures (in Japanese)			Education Lecture 8 Dr. Wen-Fed Chiou
						Education Lecture 9 Prof. Yasuyuki Hirose
	4	Invited Lecture 4 Dr. Fumino Ninomiya				Education Lecture 10 Dr. Hans Rausch
		Farewell				

Program of the 18th ICOM

Friday, Apr 15, 2016

Room A1

The First Japan-Germany Joint Symposium on Kampo Medicine and Acupuncture

(This event is semi-closed, and the participant of 18th ICOM can attend as observer)

**(Sponsored by International Society of Oriental Medicine (ISOM) Japan Chapter
and Goto College of Medical Arts and Sciences)**

Participants: 8 persons from Germany and German-speaking countries;

Approximately 20 persons from Japan, as well as some observers from USA, etc.

Anchorpersons: Yoshiharu Motoo, Heidrun Reissenweber-Hewel

Opening remarks: Yoshiharu Motoo & Heidrun Reissenweber-Hewel

Session 1. Structure and characteristics of Kampo Medicine

Chair: Klaus Hambrecht

Speaker: Masayuki Kashima (30 min)

Commentator 1: Ulrich Eberhard

Commentator 2: Bernd Kostner

Discussion (30 min)

Break (8 min)

Session 2. Concept on active ingredients of crude drugs used in Kampo Medicine

Chair: Sven Schroeder

Speaker: Toshiaki Makino (30 min)

Commentator 1: Silke Cameron

Commentator 2: Kenny Kuchta

Commentator 3: Hans Rausch

Discussion (30 min)

Break (8 min)

Session 3. Clinical trial on acupuncture

Chair: Den'ichiro Yamaoka

Speaker: Claudia Witt (30 min)

Commentator 1: Hitoshi Yamashita

Commentator 2: Takashi Seki

Discussion (30 min)

Closing remarks: Yoshiharu Motoo & Heidrun Reissenweber-Hewel

Saturday, Apr 16, 2016

Room A1

8:50 – 9:00 Opening Address

9:00 – 9:55 Invited Lecture 1

Chair: Tetsuo Akiba, Japan (Akiba Clinic, Japan)

IL-1 Dr. Yen's Kampo Medicine: Survey of Traditional Chinese Medicine in Diagrams and Tables

顏 焜榮 / Kun-Ying Yen (Taipei Medical University, Taiwan)

10:00 – 11:55 Acupuncture Symposium

(Sponsored by SEIRIN CORPORATION)

Chairs: Hitoshi Yamashita (Morinomiya Univ. of Medical Sci., Japan)
and Benjamin Chant (Australia)

S1-1 Moxibustion Treatment in Korea

Dongwoo Nam (Kyunghee University, Korea)

S1-2 The effects of moxibustion on the obese adolescent girls – Taiwanese experience

Tse-Hung Huang (Taiwan)

S1-3 Modern clinical application of moxibustion rooted in the local community: Ehime Prefectural Central Hospital's policy and methods

Akio Manabe (Ehime Prefectural Central Hospital, Japan)

S1-4 An Australian acupuncturist's perspective of moxibustion practice in East Asian countries

Benjamin Chant (Univ. New England, Armidale, Australia)

12:05 – 13:00 Luncheon Seminar 1 (Sponsored by TUMURA & CO.)

Chair: Mosaburo Kainuma (Kyusyu Univ., Japan)

LS-1 Anorexia - cachexia syndrome and Kampo medicine

Akio Inui (Kagoshima Univ., Japan)

13:05 – 15:00 Pharmaceutical Symposium

(Sponsored by Kobayashi Pharmaceutical Co., Ltd.)

Chairs: Toshiaki Makino (Nagoya City Univ., Japan)
and Ching-Chiung Wang (Taipei Medical Univ., Taiwan)

- S2-1 Anti-allergic effect of Shoseiryuto (小青竜湯) and Byakkokakeishito (白虎加桂枝湯) and the roles of each components – the roles of peony root (芍藥) and gypsum (石膏) in these formulas**
Toshiaki Makino (Nagoya City Univ., Japan)
- S2-2 The prescription philosophy of Dun Huon Ji-ShengTang (獨活寄生湯) for the prevention of arthritis**
Ching-Chiung Wang (Taipei Medical Univ., Taiwan)
- S2-3 Comparison of the improvement effects of nonalcoholic fatty liver disease of Gangjihwan (輕身丸) extracts by solvents in a high fat diet-fed obese C57BL/6 mouse model**
Soon Shik Shin (Dong-Eui University, Republic of Korea)
- S2-4 Chinmedomics strategy for research of effective substance basis and synergistic properties of Yinchenhao-Tang (茵陳蒿湯)**
Xijun Wang (Heilongjian TCM Univ., China)

**18:00 –
Gala Party**

Room B1

10:15 – 10:45 Education Lecture 1

Chair: Yoshiharu Motoo (Kanazawa Medical Univ., Japan)

EL-1 Development of acupuncture in Germany reflected by the Societas Medicinae Sinensis (SMS) and German Medical Acupuncture Association (DÄGfA)

Klaus Hambrecht (Clinic for Chinese Medicine, Germany)

10:50 – 11:20 Education Lecture 2

Chair: Kenji Watanabe (Keio Univ., Japan)

EL-2 Kampo international: Activities of the International Society for Japanese Kampo Medicine (ISJKM) and Kampo teaching for doctors in Germany

Heidrun Reißerweber-Hewel (Technical Univ. of Munich, Germany)

11:25 – 11:55 Education Lecture 3

Chair: Kenji Watanabe (Keio Univ., Japan)

EL-3 Phytotherapy in Europe

Kenny Kuchta (National Institute of Health Sciences, Japan)

13:05 – 13:35 Education Lecture 4

Chair: Keiko Ogawa (Kanazawa Univ., Japan)

EL-4 Insights from teaching Kampo medicine in Austria

Bernd Kostner (Zentrum für Ganzheitliche Medizi, Austria)

13:40 – 14:10 Education Lecture 5

Chair: Chan V.K. Abraham (Purapharm Int., HongKong)

EL-5 Current state and development of traditional Korean medicine

Joon-Seok Byun (Daegu Haany Univ., Korea)

14:15 – 14:45 Education Lecture 6

Chair: Chan V.K. Abraham (Purapharm Int., Hong Kong)

EL-6 The role of the complementary medicine in cancer treatment – Including the Korean medicine

In-Tae Kim (Jangdeuk Korean Medical Hospital, Korea)

15:05 – 16:00 General Lecture 1

Chair: Masayoshi Oyama (Gifu Pharmaceutical Univ., Japan)

GL-1 The value of collections in clarifying historical changes in Chinese herbal medicine

Eric Brand (Hong Kong Baptist University, Hong Kong)

16:00 – 16:55 General Lecture 2 (Sponsored by OMINEDO PHARMACUTICAL Co. Ltd.)

Chair: Silke Cameron (Germany)

GL-2 Japanese Kampo medicine after the great east Japan earthquake in Miyagi and Fukushima prefectures

The role of Kampo medicine after the great east Japan earthquake disaster
Shin Takayama (Tohoku Univ., Japan)

A randomized controlled trial using Kampo medicine, saikokeishikankyoto (柴胡桂枝乾姜湯) on posttraumatic stress disorder developed after the great east Japan earthquake and tsunami
Takehiro Numata (Tohoku Univ., Japan)

16:55 – 17:50 General Lecture 3

Chair: Dr. Takao Namiki (Chiba Univ., Japan)

GL-3 Present status and perspective of integrative medicine in Japan

Toshinori Ito (Osaka Univ., Japan)

Room A2

Korea Session

10:00 – 12:00 Sasang constitutional medicine symposium (Talk in English)

Chairs: Ho Soon Kim / 金鎬順 (ISOM Director / 國際東洋醫學會, Korea)

In Tae Kim / 金仁泰 (ISOM Director / 國際東洋醫學會, Korea)

KS-1 Genomic analyses on constitutional type-related traits in Korean medicine

Seongwon Cha / 車誠原

(Korea Institute of Oriental Medicine (KIOM) / 韓國韓医学研究院, Korea)

KS-2 Researches on Sasang constitutional medicine (SCM) in Korea: trend and challenges

Sang-Hyuk Kim / 金相赫

(Korea Institute of Oriental Medicine (KIOM) / 韓國韓医学研究院, Korea)

KS-3 The future of the Japanese constitution of Sasang constitutional medicine

Akiko Hirota / 廣田曄子 (Aki Clinic / 曄小児科内科)

13:00 – 16:00 Korea-Japan Oriental medical symposium

(Talk in Korean and Japanese)

Chairs: Do Young Choi / 崔道永 (Kyung Hee Univ. / 慶熙大学校, Korea)

Young-Shin Kim / 金英信 (Korea Society of Oriental Medicine / 韓國東洋医学会, Korea)

Yoshitomi Makoto / 吉富誠 (Fukuyoudou Clinic / 吉富復陽堂医院, Japan)

KS-4 History of Japan-Korea Oriental medicine cooperation / 日韓漢方交流の歴史

Yoshitomi Makoto / 吉富誠 (Fukuyoudou Clinic / 吉富復陽堂医院, Japan)

KS-5 Acupuncture for smoking cessation in Korea / 韓国の禁煙鍼

Do Young Choi / 崔道永 (Kyung Hee Univ./ 慶熙大学校, Korea)

KS-6 Thread-embedding therapy of Korea / 韓国の埋線療法

Hyun-Jong Lee / 李沄宗 (Daegu Haany Univ. / 大邱韓醫大學校, Korea)

KS-7 The truth of Shanghanlun (傷寒論) and its actual clinical application / 傷寒論の真実と臨床応用の実際

Young-Beom Rho / 盧永範 (Korean Medical Association of Clinical Sanghan-Geumgwe / 大韓傷寒金匱医学会)

薬剤師向け漢方講座（日本語）

／Lectures for the pharmacists in Okinawa (in Japanese)

(Sponsored by Japan Kanpo Society)

16:10 – 17:00

Chair: Toshiaki Makino (Nagoya City Univ., Japan) / 牧野利明（名市大院薬学研究科）

PL-1 Drug interactions among functional foods, crude drugs, kampo medicines and Western medicines / 生薬・漢方薬・機能性食品と医薬品の薬物相互作用について
Katsunori Nakamura (Univ. Ryukyu, Japan) / 中村克徳（琉球大学附属病院薬剤部）

17:00 – 17:50

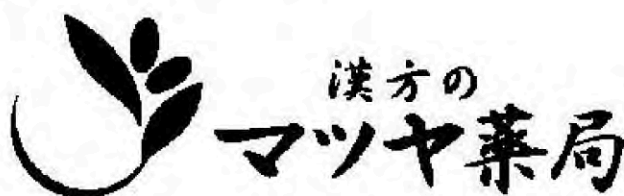
Chair: Katsunori Nakamura (Univ. Ryukyu, Japan) / 中村克徳（琉球大学附属病院薬剤部）

PL-2 The characteristics of Kampo granule prescription and medication counseling
/ 漢方エキス製剤の特徴を知り、服薬指導に生かす
Toshiaki Makino (Nagoya City Univ., Japan) / 牧野利明（名市大院薬学研究科）

The 18th ICOM, OKINAWA のご盛会を

お祝い申し上げます。

厳選した生薬と伝統の製剤技術



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Room B2

Taiwan Session

13:00 – 13:55 Special Lecture in Taiwan Session

Chair: Chieh. Fu Chen (National Yang. Ming Univ., Taiwan)

TS-S Evidencen based medicine in acupuncture analgesia (talk in English)

Lin, Jaung Geng (China Medical Univ., Taiwan)

14:00 – 17:00 Taiwan Session

Chair: Lin, Jaung Geng / 林昭庚 (China Medical Univ., Taiwan)
and Chen, Jing-Ming / 陳俊明 (National Union of Chinese Medical
Doctors' Association, Taiwan)

TS-1 The assessment of traditional Chinese medicine on the risk of dementia in stroke patients / 中醫藥治療對預防中風病人失智症之療效評估 (talk in English)

Shih, Chun Chuan / 施純全 (Associate Professor, I-Shou Univ., Taiwan)

TS-2 Traditional Chinese Medicine Treatment for acne / 痤瘡中醫療法及治療經驗 (talk with English)

Chen, Chao Tsung / 陳潮宗 (President, Taiwan Society of Chinese Medical
Cosmetology, Taiwan)

TS-3 Misdiagnosed menopause symptoms / 易被誤診的停經症候群 (talk in Chinese)

Chen, Jing Ming / 陳俊明 (Vice President, National Union of Chinese Medical
Doctors' Association, Taiwan)

TS-4 Therapeutic experience on facial nerve palsy / 顏面神經麻痺之治療經驗 (talk in Chinese)

Li, Fong Yu / 李豐裕 (Vice President, National Union of Chinese Medical Doctors'
Association, Taiwan)

TS-5 The clinical application of Qingn Shangn Juann Tong- ang in the treatment of headache / 清上蠲通湯治療頭痛的臨床應用 (talk in Chinese)

Chen, Chih-Fang / 陳志芳 (President, Taiwan Society of Chinese Medicine
Andrology, Taiwan)

TS-6 WEN's acupuncture : Modulation autonomic nervous of system / 溫氏直刺自律神經調控法 (talk in Chinese)

Wen, Tsung-Kai / 溫崇凱 (President, Taiwan Clinical Chinese Medicine Association,
Taiwan)

Room C1

The Toumonkai 藤門会 Special Session in Okinawa

with Dr. Shou 鍾先生 and Dr. Tei 鄭先生 from Taiwan

(Talk in Chinese and Japanese)

The Symposium On Jyoukitou 「承氣湯類」 and related prescription

Chair: Takao Namiki / 並木隆雄 (Chiba Univ., Japan / 千葉大学)

12:00 – 12:40

TM-1 The study of the pathology of “shitimotsukoubokutousyou (七物厚朴湯証)” / 七物厚朴湯証の病態考察

Yoshihiro Fukuta / 福田佳弘 (Fukuta Orthopedic Clinic, Japan / 福田整形外科医院)

12:45 – 13:30

TM-2 Tiao Wei Cheng Qi Tang (調胃承氣湯) for the treatment of Immune thrombocytopenic Purpura (ITP) / 以調胃承氣湯治療原發性紫斑症

Chung Chen li / 鍾箴禮 (Ching Shiang Chinese Medicine Clinic, Taiwan / 慶祥中医診所)

13:40 – 14:20

TM-3 A secondary amenorrhea woman had led to get pregnant and safety delivery by a long-term(including 14 months before her pregnancy and the whole gestation period) continuous medication of Dai-Joki-to (大承氣湯) combined with Dai-Saiko-to (大柴胡湯) : We take the clinicopathologic difference between Dai-Joki-to and Dai-Saiko-to into consideration in order to discriminate their peculiarities by this effective case study and referring to Chinese medical classics to verify it. / 大承氣湯合大柴胡湯の長期（妊娠 14 ヶ月前から妊娠の全期間）投与による妊娠・出産に至った二次性無月経の一例 ～ 症例と古典より、大承氣湯と大柴胡湯の病態異同を検討～

Chiensho Lai / 賴建守 (Kampo Medical Lai Clinic, Japan / 漢方医療 賴クリニック)

14:25 – 15:05

TM-4 Compare with the three types of Chenqi Tang (承氣湯) described in the “Shang Han Lun(傷寒論)” and clinic use, with Huanglian Tang(黃連湯) to treat colon cancer stage 4 / 由三承氣湯的古典條文分析比較與臨床運用，合黃連湯治療大腸癌末期病例

Hung Tsu Cheng / 鄭宏足 (Life Care Classic Chinese Medicine / 傳愛經典中医診所)

15:10 – 15:25

TM-5 The Kampo medicine jokin to (承氣湯) and the intestinal immune system / 漢方薬と腸管での免疫—承氣湯との関係

Takao Namiki / 並木隆雄, Yoshiro Hirasaki / 平崎能郎
(Chiba Univ., Japan / 千葉大学)

15:30 – 16:00 General Discussion

Sunday, Apr 17, 2016

Room A1

9:00 – 9:55 President Lecture

Chair: Lee Eungse (Secretary General of ISOM, Korea)

PL The role of Kampo medicine in treating rheumatic diseases

Shuji Ohno (Ohno Clinic, Japan)

10:00 – 10:55 Invited Lecture 2

Chair: Shuji Ohno (Ohno Clinic, Japan)

IL-2 Integration of Oriental medicine into medical care of cancer patients in the US

Gary Deng (Memorial Sloan-Kettering Cancer Center, USA)

11:00 – 11:55 Invited Lecture 3

Chair: Claudia Witt (Univ. of Zurich, Switzerland)

IL-3 Challenges and opportunities in the advancement of Korean medicines

Lee Hyejung (President, Korea Institute of Oriental Medicine [KIOM], Korea)

12:05 – 13:00 Luncheon Seminar 2

(Sponsored by KOTARO PHARMACEUTICAL CO., LTD., Kracie
Pharmaceutical Co., Ltd., and OHSUGI Pharmaceutical Co., Ltd.)

Chair: Hiromichi Yasui (Yasui Clinic, Japan)

**LS-2 Immediate pain relief by acupuncture. Randomized placebo controlled studies
with press tack needles**

Sven Schröder (Univ. Medical Center Hamburg-Eppendorf, Germany)

13:05 – 14:00 Special Lecture

Chair: Keigo Nakata (President of ISOM, Japan)

SL-1 Japan Society for Oriental Medicine (JSOM): History and prospects

Hiroshi Sato (Japan Society for Oriental Medicine, Japan)

14:05 – 16:00 Medical Symposium

(Sponsored by Kracie Pharmaceutical Co., Ltd.)

Chair: Silke Cameron (Germany)
and Shin Takayama (Tohoku Univ., Japan)

S3-1 Preclinical and gene expression study of new herbal preparation targeting triple-negative breast cancer

Seong-Gyu Ko (Korea)

S3-2 The potential role of *Solanum nigrum* in treating various cancers

Chen-Jei Tai (Taipei Medical Univ., Taiwan)

S3-3 Identification of distinct symptom sets predictive of positive outcome for treatment of headache with two Kampo formulae by using TOMRASS, a patient-based questionnaire database

Yoko Kimura (Tokyo Women's Medical Univ., Japan)

16:05 – 16:35 Invited Lecture 4

Chair: Yoko Kimura (Tokyo Women's Medical Univ., Japan)

IL-4 Heal the body by treating skin

Fumino Ninomiya (Aoki Clinic, Japan)

16:40 – 17:00 Farewell ceremony

Room B1

10:00 – 12:00 Japan Session (talk in Japanese)

Chair: Keisuke Hagihara (Dept. Kampo Med, Osaka Univ. Grad. Sch. Med., Japan)

萩原圭祐 (阪大院医漢方医学寄附講座)

Nakata Hideyuki (Kampo Medicine Center, Nerima Sogo Hospital, Japan)

中田英之 (練馬総合病院漢方医学センター)

JS-1 Overview of the role of the oriental medicine on the frailty and sarcopenia – the evidence of anti-sarcopenic effect of Go-sha-jinki-Gan (牛車腎気丸) / フレイルサルコペニアでの東洋医学の役割—オーバービュー—牛車腎気丸の抗サルコペニア効果について

Keisuke Hagihara (Dept. Kampo Med, Osaka Univ. Grad. Sch. Med., Japan) /

萩原圭祐 (大阪大学大学院医学系研究科漢方医学寄附講座)

JS-2 Disease Modifying therapy of Alzheimer's disease in the near future – from the aspect of psychological frailty – / アルツハイマー病治療の今後の展望について—精神心理的フレイルの側面から—

Shinji Tagami (Dept. Psychiatry, Osaka Univ. Grad. Sch. Med., Japan) /

田上真次 (大阪大学大学院医学系研究科精神医学)

JS-3 The consideration of frailty from the point of view of home pharmacist / 在宅薬剤師の立場からフレイルを考える

Hitoshi Teramoto (Aoi Pharmacy, Japan) / 寺本 仁 (あおい薬局)

JS-4 Collaborative approaches to frailty in Oriental medicine / フレイルに対する東洋医学連携アプローチ

Hideyuki Nakata (Kampo Medicine Center, Nerima Sogo Hospital, Japan) /

中田英之 (練馬総合病院漢方医学センター)

15:05 – 16:30 Lectures open to the public (talk with Japanese) / 市民公開講座 (日本語)

Chair: Hirofumi Tomori (Naha City Hospital, Japan) / 友利寛文 (那覇市立病院)

OP-1 Kampo Q&A / 漢方 Q&A

Cholsong Yang (Yan Herb Clinic, Japan) / 梁哲成 (やんハーブクリニック)

OP-2 Why do we need Kampo Medicine in modern society? /

なぜ現代においても漢方は必要とされるのか？

Yasuo Nakahara (Nakahara Kampo Clinic, Japan) / 仲原靖夫 (仲原漢方クリニック)

Room A2

14:15 – 14:45 Education Lecture 7

Chair: Zuimei Miyazaki (Miyazaki Clinic, Japan)

- EL-7 Integrating traditional Chinese medicine healthcare into diabetes care by Reducing the risk of developing breast cancer among type 2 diabetic patients: A population-based case control study**
Chien-Tung Wu (Taipei City Hospital, Taiwan)

14:50 – 15:20 Education Lecture 8

Chair: I-Hshin Lin (Tzu Chi Univ., Taiwan)

- EL-8 Beneficial effect of *Vitis thunbergii* on osteoporosis**
Wen-Fed Chiou (Ministry of Health and Welfare, Taiwan)

15:25 – 15:55 Education Lecture 9

Chair: Klaus Hambrecht (Clinic for Chinese Medicine, Germany)

- EL-9 Current state of ISO - terms and concepts and those power**
Yasuyuki Hirose (Univ. of the Ryukyus, Japan)

16:00 – 16:30 Education Lecture 10

Chair: Kenny Kuchta (National Institute of Health Sciences, Japan)

- EL-10 Current state of the ISO - process relating to Kampo-TCM-Oriental medicine**
Hans Rausch (Germany)

Poster presentations

Medicinal History

- P-1 The dispute and the dilemma of Chinese herb management in Taiwan**
Po-Hsun Chen (Inst. Science, Technology and Society, National Yang Ming Univ., Taiwan)
- P-2 To explore the usage of porridge from the Chinese classics of traditional and modern discourse**
Mei-Tian Jou (Grad. Inst. Chinese Medicine, China Medical Univ., Taiwan)
- P-3 To explore the abdominal diagnosis from the “Zu Bing Yuan Hou Lung” (General treatises on the causes and symptoms of diseases)**
Li-Min Chueh (Grad. Inst. Chinese Medicine, China Medical Univ., Taiwan)
- P-4 A study on sudatoriums for sweating treatment in Joseon dynasty, Korea -based on the annals of the Joseon Dynasty-**
Jichung Song (Coll. Korean Medicine, Daegu Haany Univ., Kyungbuk, Korea)
- P-5 Bibliographic analysis of Ben Lou (abnormal uterine bleeding) in encyclopedia of traditional Chinese medicine**
Yi-Rong Lin (Grad. Inst. Chinese Medicine, China Medical Univ., Taiwan)
- P-6 The influence of the official medical educational policies on the development of Sphygmography during Ming and Ching dynasties**
Hui-Mei Chen (Grad. Inst. Chinese Medicine, China Medical Univ., Taiwan)
- P-7 A review of the development of Eastern and Eastern breast cancer management methods from the 14th to 19th century**
Chiu-Hui Chao (Grad. Inst. Chinese Medicine, China Medical Univ., Taiwan)
- P-8 Sohaku Asada and his student in newspaper in Meiji era**
Takanori Matsuoka (Toho, Univ. School of Medicine, Japan)
- P-9 A study of the norms of traditional Chinese medicine since late Qing dynasty (1840-1949)**
Hsuan-Ching Tseng (Grad. Inst. Chinese Medicine, China Medical Univ., Taiwan)
- P-10 Finding the Meridian & Five Elements: in a View of TCM Literature**
Chi-Fang Chen (Grad. Inst. Chinese Medicine, China Medical Univ., Taiwan)

- P-11 The Implication of NUMBER in Shanghan Lun -Take the Hetu (河圖) and Five phases for example.**
Shu-Yun Huang (Chinese Medicine Dept. Chi Mei Medical Center, Taiwan)
- P-12 Studies on processed licorice (1) - Herbological and analytical studies of roasted licorice (炙甘草) and honey-roasted licorice (蜜炙甘草)**
Misato Ota (Dept. Pharmacognosy, Grad. Sch. Pharm. Sci., Nagoya City Univ., Japan)

Experimental Pharmacology for Traditional Medicines

- P-13 Studies on processed licorice (2) - Comparison of the immunostimulatory effects among licorice (甘草) samples with or without heat-processing and pre-treatment with honey in cultured intestinal epithelial cells**
Yasutaka Nagachi (Dept. Pharmacognosy, Grad. Sch. Pharm. Sci., Nagoya City Unive., Japan)
- P-14 Ameliorating effects *Amomum cadamomum* Linné of on TNF- α -induced adipocyte dysfunction**
Kyung Hwa Kang (Dept. Physiology, Coll. Korean Medicine, Dongeui Univ., Korea)
- P-15 Significant inhibition of leukemia WEHI-3 cells growth by arsenic trioxide and extract of *Hedyotis diffusa* Willd *in vitro* and *in vivo***
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- P-16 Anti- α -glucosidase and antin dipeptidyl peptidasen IV activities of extracts and purified compounds from *Vitis thunbergii* var. *taiwaniana***
Yin-Shiou Lin (Grad. Inst. Pharmacognosy, Taipei Medical Univ., Taiwan)
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Yen Fong Lin (Dept. Bioindustry Technology, Dayeh Univ., Taiwan)
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Yu-Chuen Huang (China Medical Univ. Hospital, Taiwan)
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Huang Shu-Ming (Dept. Food & Beverage Management, Fortune Inst. Technology, Taiwan)

- P-20 Effect of resveratrol oligomers on anti-glycation, monoamine oxidase b inhibitory activities, and protection against methylglyoxal-induced SH-SY5Y cytotoxicity**
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Tuzz-Ying Song (Dept. Bioindustry Technology, Dayeh Univ., Taiwan)
- P-22 Ginseng flower reversed the memory deficits caused by high fructose-fed rats via cortical antioxidant defenses and CREB-1 levels**
Chi-Rei Wu (Depart. Chinese Pharm. Sci. Chinese Med. Resources, China Med. Univ., Taiwan)
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Fan-Shiu Tsai (The Sch. Chinese Medicine for Post-Baccalaureate, I-Shou Univ., Taiwan)
- P-25 Antidepressant-like activity of the extract from Semen Cucurbitae after application of atmospheric plasma technology in the forced swimming test and in the tail suspension test in mice**
Yun-Chieh Chen (Sch. Pharmacy, Coll. Pharmacy, China Medical Univ., Taiwan)
- P-26 Acupuncture and electroacupuncture deliver a TRPV1-dependent signaling pathways in central spinal cord level**
Ming-Yen Chen (Grad. Inst. Acupuncture Science, China Medical Univ., Taiwan)
- P-27 Therapeutic effect of electroacupuncture on a mice fibromyalgia pain model: Role of nmda receptors and related mechanisms**
Jun Yang (China Medical Univ. Hospital, Dept. Chinese Medicine, Taiwan)
- P-28 Analgesic effect of electroacupuncture in a mouse fibromyalgia model: role of ASIC3 and relevant molecules**
Liang-Ta Yen (Grad. Inst. Acupuncture Science, China Medical Univ., Taiwan)

- P-29 Processed aconite root (附子) and its active ingredient neoline may alleviate oxaliplatin-induced peripheral neuropathic pain**
Toshiaki Suzuki (Dept. Pharmacognosy, Grad. Sch. Pharm. Sci., Nagoya City Univ., Nagoya, Japan)
- P-30 Partial activation and inhibition of TRPV1 channels by evodiamine and rutaecarpine, two major components of *evodiae fructus***
Shenglan Wang (Dept. Pharmacy, Sch. Pharmacy, Hyogo Univ. Health Sciences, Japan)
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Chin-Tsang Yang (Sch. Chinese Medicine, China Medical Univ., Taiwan)
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Yu-Ting Tseng (Grad. Inst. Natural Products, Coll. Pharmacy, Kaohsiung Med. Univ., Taiwan)
- P-33 Increasing neuroprotective effects of micronized *Hericium erinaceus* mycelium showed promising in anti-Parkinson's disease**
Yu-Min Lin (JOWIN BIOPHARMA, New Taipei City, Taiwan)
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Fang-Yu Liang (Grad. Inst. Pharmacognosy, Taipei Medical Univ., Taiwan)
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Tzu-Tung Liao (Grad. Inst. Pharmacognosy, Taipei Medical Univ., Taiwan)
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Yi-Tzu Lin (Ph.D. Program for the Clinical Drug Discovery from Botanical Herbs, Taipei Med. Univ., Taiwan)
- P-38 *Phellinus igniarius* extract inhibits hepatitis B virus infection in human hepatocytes**
Cheng Huang (National Research Inst. Chinese Medicine, Taiwan)

- P-39 The hepatoprotective effect of *scoparia dulcis* on carbon tetrachloride induced chronic liver injury in mice**
 Bao-jiyi Chen (Coll. Biotechnology and Bio-resources, Da-Yeh Univ., Taiwan)
- P-40 Hepatoprotective effect of *Polygonum orientale* on carbon tetrachloride-induced acute liver damage in mice**
 Hao Yuan Cheng (Chung-Jen Junior Coll. Nursing, Health Sciences Management, Taiwan)
- P-41 Scutellariae radix and Rhei rhizoma formula alleviates chemical-induced liver fibrosis in a rat model**
 Tai-Long Pan (Sch. Traditional Chinese Medicine, Chang Gung Univ., Taiwan)
- P-42 Antroquinonol ameliorates alcoholic liver disease induced by chronic plus binge ethanol feeding in mice**
 Hsin-Yi Yang (Dept. Nutrition, I-Shou Univ., Taiwan)
- P-43 *Buddleja officinalis* MAXIM. flower extract prevents oxidative stress-mediated hepatic injury via AMPK activation**
 Ji Yun Jung (Coll. Korean Medicine, Daegu Haany Univ., Korea)
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 Sang Mi Park (Coll. Korean Medicine, Daegu Haany Univ., Korea)
- P-45 Effect of Goreisan (五苓散) on urinary concentrating ability and expression of aquaporins in Uninephrectomized rats**
 Michiko Jo (Dept. of Kampo Diagnostics, Inst. Natural Medicine, Univ. Toyama, Japan)
- P-46 Inhibited effect of keishibukuryogan (桂枝茯苓丸) added with Rhubarb (Rhei Rhizoma, Daio) on progression of renal dysfunction in 5/6 nephrectomized rat**
 Naotoshi Shibahara (Dept. Kampo Diagnostics, Inst. Natural Medicine, Univ. Toyama, Japan)
- P-47 Protective effects of bromelain on doxorubicin-induced short- and long-term cardiac and renal dysfunction in rat model**
 Yueh-Chiao Yeh (Dept. Natural Biotechnology, Nanhua Univ., Taiwan)
- P-48 p-Hydroxyacetophenone inhibits the expression of NF- κ B in λ -carrageenan induced inflammation in mice**
 Chang Ching-Wen (Dept. Chinese Pharm. Sci. Chinese Med. Resources, Coll. Biopharm. Food Sci., China Med. Univ., Taiwan)

- P-49 Development of a rapid identification compounds from *Angelica keiskei* Koidzumi (Ashitaba) with tyrosinase inhibitory activities by UPLC. MS/MS Jia. Hao Lee (Sch. Pharmacy, Taipei Medical Univ., Taiwan)**
- P-50 Anti-inflammatory effects of the fermentation extracts consisting of soybean, red ginseng and Citrus Unshiu Peel**
Sook Jahr Park (Medical Research Center Globalization Herbal Formulation, Coll. Korean Medicine, Daegu Haany Univ., Korea)
- P-51 Effects of Shin'iseihaito (辛夷清肺湯) on allergic sinusitis induced by ovalbumin in mice**
Toru Konishi (Dept. Pharmacognosy, Grad. Sch. Pharm. Sci., Nagoya City Univ., Nagoya, Japan)
- P-52 Zerumbone enhances the Th1 response and ameliorates ovalbumin-induced Th2 responses and airway inflammation in mice**
Ying-Hua Shieh (Dept. of Family Medicine, Wan Fang Hospital, Taipei Medical Univ., Taiwan)
- P-53 Eriodictyol ameliorates lipopolysaccharide-induced acute lung injury in mice through reducing inflammation**
Wang-Rong Lin (Dept. Chin. Pharm. Sci. Chin. Med. Resources Inst., Taiwan)
- P-54 Ban Long Wan inhibits the LPS-induced inflammation in RAW264.7 cells and mouse models**
Jui-Shu Chang (Sch. Chin. Med., Grad. Inst. Integr. Med. Coll. Chin. Med., China Med. Univ., Taiwan)
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Jong Rok Lee (Dept. Pharmaceutical Engineering, Daegu Haany Univ., Korea)
- P-56 Anti-hyaluronidase activity and immune response by tomato saponin, esculeoside A / esculeoside B**
Jian-Rong Zhou (Faculty Pharm. Sci., Sojo Univ., Japan)
- P-57 Pharmacological effects of Pruni cortex (*Prunus jamasakura* Siebold ex Koidzumi) on inflammation induced by *Propionibacterium acnes***
Chiaki Murayama (Kampo Research Laboratories, Kracie Pharma Ltd., Japan)
- P-58 Anti-osteoarthritis effects of 2, 3, 5, 4'-tetrahydroxystilbene-2-O- β -D-glucoside from *Polygoni multiflori* in vitro and in vivo**
Po-Wei Tsai (Dept. Fashion Design Styling, Fortune Inst. Technology, Taiwan)

- P-59** **San'oshashito (TJ-113, 三黃瀉心湯) improves postmenopausal ischemia reperfusion injury via its estrogenic effects**
Mayuko Sakanashi (Dept. of Pharmacol., Grad. Sch. Medicine, Univ. the Ryukyus, Japan)
- P-60** **Regulation of *Helminthostachys zeylanica* (L.) Hook extracts in intestinal cytokine and anti-inflammatory effects during acute colitis**
Li-Ching Chang (Dept. Occupational Therapy, I-Shou Univ., Taiwan)
- P-61** **Studies of *Punica granatum* on the radiation-induced biological damages *in vitro* and *in vivo* tests**
Chia-Jung Lee (Ph.D. Program for Clinical Drug Discovery Chin. Herbal Med., Coll. Pharm., Taipei Med. Univ., Taiwan)
- P-62** **A comparative preclinical pharmacokinetics of herbal ingredient following oral administration of single compound, single herb and multiple herbal formulation in rats**
Tung-Hu Tsai (Inst. Traditional Medicine, Sch. Medicine, National Yang-Ming Univ., Taiwan)
- P-63** **Effect of Yin Qiao San (銀翹散) against *Streptococcus pneumoniae* murine model by microarray analysis**
Masaaki Minami (Dept. Bacteriology, Grad. Sch. Medical Sciences, Nagoya City Univ., Japan)
- P-64** Cancelled
- P-65** **Adjunctive traditional Chinese medicine therapy improves survival of patients with pancreatic cancer in Taiwan: A nationwide populationn based study**
Yi. Ting Kuo (Sch. Chinese Medicine, China Medical Univ., Taichung, Taiwan)
- P-66** **Antin metastasis effects of Gilgyungn tang on human bladder cancer cell are related with suppressing MMPn 2 and n 9 expressionsn an *in vitro* study** Su Hyun Hong (Dept. Biochemistry, Dongeui Univ. Coll. Oriental Medicine, Korea)
- P-67** **Norcantharidinn induced apoptosis stress signaling: modulation of the Akt/FoxO4/Mcln 1 signaling cascade in prostate cancer cells**
Yi. Hsien Hsieh (Dept. Biochemistry, School of Medicine, Chung Shan Medical Univ., Taiwan)

- P-68 Apoptotic cell death by Hwangheuksan (黃黑散), a traditional herbal formulation, in HCT116 human colorectal cancer cells: Roles of ROS generation and PI3K/Akt signaling pathway**
Yung Hyun Choi (Dept. Biochemistry, Dongeui Univ. Coll. Korean Medicine, Korea)
- P-69 Targeting colon cancer stem cell by anthraquinonol: Insight into mechanism and therapeutic target**
Cheng-Wei Lin (Dept. Biochem. and Mol. Cell Biol., Coll. Medicine, Taipei Medical Univ., Taiwan)
- P-70 Knockdown of Pentraxin 3 suppresses tumorigenicity and metastasis of human cervical cancer cells**
Yi-Hsien Hsieh (Dept. Biochemistry, Sch. Medicine, Chung Shan Medical Univ., Taiwan)
- P-71 The cytotoxic effect and molecular mechanism of nonylphenol in human gastric cancer cells**
Chun-Chi Kuo (Dept. Nursing, Tzu Hui Inst. Technology, Taiwan)
- P-72 Synergistic apoptotic effect of fisetin in combination with sorafenib in human cervical cancer HeLa cells through activation death receptor-5 mediated caspase-8/-3 and mitochondria-dependent apoptotic pathway**
Chia-Liang Lin (Inst. Biochem., Microbiol. Immunol., Chung Shan Medical Univ., Taiwan)
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Chu-Liang Lin (Inst. Biochem. Biotech., Coll. of Medicine, Chung Shan Medical Univ., Taiwan)
- P-74 The anti-metastasis effect of omega-3 fatty acids derivatives in prostate cancers.**
Chiu-Li Kao (Dept. Nursing, Tzu Hui Inst. Technology, Taiwan)
- P-75 Quercetin induced apoptosis of human oral cancer SAS cells through mitochondria and endoplasmic reticulum mediated signaling pathways**
Yi-Shih Ma (Dept. Chinese Medicine, E-Da Hospital, Kaohsiung, Taiwan)
- P-76 Inhibition of pentraxin 3 in glioma cells impairs proliferation and invasion *in vitro* and *in vivo***
Te-Fang Yang (Inst. Biochemistry, Microbiol. Immunol., Chung Shan Medical Univ., Taiwan)

- P-77** ***Morinda citrifolia* fruit water-EtOAc extracts induced apoptosis in human breast and liver cancer cells**
Hsiu chen Huang (Dept. Applied Science, National Hsinchu Univ. Education, Taiwan)
- P-78** **Naringenin inhibited migration of lung cancer cells via inhibition of MMP-2 and MMP-9**
Yuh-Ming Chang (Inst. Biochem. Biotechnol., Chung Shan Medical Univ., Taiwan)
- P-79** **Synthesis and 3D-QSAR model of Jolkinolide analogues**
Ke Wang (Sch. Pharm., Coll. Pharm., China Medical Univ., Taichung, Taiwan)
- P-80** **A novel synthetic 7-arylindoline-1-benzenesulfonamides with anticancer activity in Colorectal cancer HCT116 cells**
Tung Yun Wu (Ph.D. Program Clin. Drug Discovery Botanical Herbs, Taipei Med. Univ., Taiwan)
- P-81** **Potential anti-cancer therapy in non-small cell lung cancer with traditional Chinese Medicine *Corex mori* and cisplatin**
Ming-Wei Chao (Dept. Bioscience Technology, Chung Yuan Christian Univ., Taiwan)
- P-82** **Beneficial effects of Xue-Fu-Zhu-Yu decoction (血府逐瘀湯) on metabolic stressed APPswe/PS1dE9 mice.**
Hui-Kang Liu (Div. Basic Chinese Medicine, National Research Inst. Chinese Medicine, Ministry of Health and Welfare, Taiwan)
- P-83** **Search of the active effective crude drugs in goshajinkigan (牛車腎氣丸) on muscle atrophy of the senescence-accelerated mice**
Tomoaki Ishida (Dept. Pharmacognosy, Grad. Sch. Pharm. Sci., Nagoya City Univ., Nagoya, Japan)
- P-84** ***In vitro* preventive effect of the extract of goshajinkigan (牛車腎氣丸) on muscle atrophy and its active constituents**
Ke Ye (Dept. Pharmacognosy, Grad. Sch. Pharm. Sci., Nagoya City Univ., Nagoya, Japan)
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Wei-Yong Lin (Grad. Inst. Integrated Medicine, China Medical Univ., Taiwan)
- P-86** **Functional components analyses and assessments of water and ethanol extracts from *Djulis* sprouts**
Jing-Bin Huang (Dept. Bioindustry Technology, Dayeh Univ., Taiwan)

- P-87 Screening of crude drugs used in Japanese traditional Kampo medicine that have inhibitory effect of organic anion transporting peptide (OATP)-2B1**
Rie Iijima (Dept. Pharmacognosy, Grad. Sch. Pharm. Sci., Nagoya City Univ., Nagoya, Japan)
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Shih. Yin Chen (Sch. Chinese Medicine, China Medical Univ., Taiwan)
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Jin Im Hong (Dept. Medicine Classics, Coll. of Korean Medicine, Deajeon Univ., Korea)
- P-90 A study on analyzing the relationship of formulae with comparing its components (2)**
Heewon Jang (Dept. Medical Classics, Coll. Korean Medicine, Wonkwang Univ., Korea)
- P-91 Comparison of Chrysanthemi Flos (菊花) derived from *Chrysanthemum morifolium* and *C. indicum* about the agonistic activity on PPAR γ and their active ingredients**
Fuzi Zhang (Dept. Pharmacognosy, Grad. Sch. Pharm. Sci., Nagoya City Univ., Nagoya, Japan)
- P-92 The development of IPCD method n Quick and easy preparation method for decoctions of Kampo formula inspired by the method of boiling powdered crude drugs in the Song period of China n**
Tsukasa Fueki (Matsuya Pharmacy, Japan)

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Lih-Geeng Chen (Dept. Microbiology, Immunol. Biopharmaceuticals, National Chiayi Univ., Taiwan)
- P-94 Comparative study on herbal extract formulations covered by the national health insurance in Korea, Japan, and Taiwan**
Ching-Wen Huang (Inst. Safety, Efficacy Effectiveness Evaluation Korean Med., Kyung Hee Univ., Korea)

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Lie-Chwen Lin (National Research Inst. Chinese Medicine, Minist. Health Welfare, Taiwan)
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Young-Sung Ju (Coll. Korean Medicine, Woosuk Univ., Korea)
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Chia-Jung Lee (Ph.D Program Clin. Drug Discovery Botanical Herbs, Taipei Med. Univ., Taiwan)
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Jerome G. Ganzon (Sch. Pharm., Coll. Pharm., Taipei Medical Univ., Taiwan)
- P-99 The quality of Chenpi (陳皮) depends on the processing of air dried time**
Ya-Chieh Tsai (Grad. Inst. Pharmacognosy, Taipei Medical Univ., Taiwan)
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Li-Yao Tsai (Sch. Pharm., Coll. Pharm., Taipei Medical Univ., Taiwan)
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- P-104 Discussion five shu points collocates with four seasons**
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Hobin Moon (Bichedam Clin. Korean Medicine, Korea)
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Yuse Okawa (Dept. East Asian Traditional Medicine, Ehime Prefectural Central Hospital, Japan)
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Jeong Hwan Park (Korea Inst. Oriental Medicine, Korea)
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Junji Miyazaki (Dept. Acupuncture, Takarazuka Univ. Medical Health Care, Japan)
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Chen-Cheng Yang (Health Management Center, Kaohsiung Municipal Ta-Tung Hospital, Taiwan)
- P-110 Acupuncture and Leeches is the complex treatment of a facial nerve's neuropathy**
Yury Ponomarev (Clin. Oriental Medicine, Vladivostok, Russia)
- P-111 Moxibustion improved knee pain of cancer-bearing woman by stimulating TRP (Transient Receptor Potential) channels: a case report**
Yukari Nose (Mie Univ., Hospital Dept. Integrated Medicine/Acupuncture Moxibustion, Japan)
- P-112 Efficacy of placenta therapy on different types of diseases -Acupuncture point injection-**
Mahiko Nagase (Kichijyoji Traditional Chinese Medicine Clinic, Japan)
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Kyeong Mee Park (Inno Oriental Clinic, Korea)
- P-114 Acupuncture improves the QOL of patients with cancer under palliative care**
Ai Kouchi (Dept. Oriental Integr. Med., Saitama Medical Univ.)

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Shoko Masuyama (Morinomiya Univ. of Medical Sciences, Japan)
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Hiroie Motoyama (Grad. Sch. Life Sci. Systems Engineering, Kyushu Inst. Technology, Japan)
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Yiu Ming Wong (Hong Kong Physically Handicapped & Able Bodied Association, Hong Kong)
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Ying-Ling Chen (TCM Integrated Information Center, Dept. Chinese Med., Changhua Christian Hospital, Taiwan)
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Yu-Chen Lee (Dept. Acupuncture, China Medical Univ. Hospital, Taiwan)
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Bernice Lottering (Intl. Master Program, Grad. Inst. Acupuncture Sci., China Medical Univ., Taiwan)
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Yi-Chun Ma (SGrad. Inst. Chinese Medicine, China Medical Univ., Taiwan)

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Chiyoung Park (Saengki Oriental Medical Clinic, Korea)
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Yoshiko Naito (Naito Acupuncture Moxibustion Clinic, Japan)
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Hidetoshi Yamaguchi (Yanagihara Acupuncture Moxibustion Clinic, Japan)
- P-129 The effects of season and plant height on the constitution of the fruits according to the Circle theory**
Shih-chin Wei (TCM Integrated Information Center, Dept. Chinese Medicine, Taiwan Christian Hospital)

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- P-131 Investigation of characteristics of traditional Chinese medicine constitutions in patients with angina**
Yi-Chia Huang (Grad. Inst. Chinese Med., Coll. Chinese Med., China Med. Univ., Taiwan)
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- P-135 Clinical research trend for integrative medicine in korea; A systematic review**
Eui-Hyoung Hwang (Dept. Rehabilitation Med. Korean Med., Pusan National Univ. Korean Med. Hospital, Korea)
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Akiyoshi Yamanaka (Yurigaoka Clinic, Japan)
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Yu. Chiang Hung (Dept. Chinese Med., Kaohsiung Chang Gung Memorial Hospital, Taiwan)
- P-139 Identification of tongue and pulse indices which related to abnormal constitution**
Shan. Yu Su (Dept. Chinese Medicine, China Medical Univ. Hospital, Taiwan)
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Yun. Ning Tsai (Grad. Inst. Chinese Med., College of Chinese Med., China Med. Univ., Taiwan)
- P-141 SEED: the six excesses (Liu Yin) evaluation and diagnosis scale** PeiJung Chiang (Taichung Veterans General Hospital, Taiwan)
- P-142 The constitution and heart rate variability in lupus nephritis**
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- P-143 The relationship between tongue color and the subjective premenstrual body weight change**
Yin. Jen Chang (Dept. Chinese Medicine, China Medical Univ. Hospital, Taiwan)
- P-144 The investigation to standard abdominal patterns of Tokin Shakuyakun San (当帰芍薬散) or Keishin bukuryon Gan (桂枝茯苓丸) in Kampo medicine** Shuji Yakubo (Div. General Medicine, Dept. Medicine, Nihon Univ., Sch. Med., Japan)

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Yu-Chun Lin (Sch. Chinese Medicine, China Medical Univ., Taiwan)
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Akira Morita (Dept. Japanese-Oriental (Kampo) Med., Grad. Sch. Med., Chiba Univ., Japan)
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Yui Sasaki (Dept. of Preventive Medicine, Coll. Korean Medicine, Kyung Hee Univ., Korea)
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Koichiro Tanaka (Dept. Traditional Medicine, School of Medicine, Toho Univ., Japan)
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Li-Yu Hsiao (Kaohsiung Chang Gung Memorial Hospital, Taiwan)
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Kuei-Feng Shih (Kaohsiung Municipal Ta-Tung Hospital, Taiwan)
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Pei-Ying Chou (Grad. Inst. Pharmacognosy, Taipei Medical Univ., Taiwan)
- P-154 Prescription patterns of concentrated extract product: Ban-Xia-Xie-Xin-Tang (半夏瀉心湯) for disorders of function of stomach in Taiwan: A population-based study**
Pin-Chen Huang (Grad. Inst. Pharmacognosy, Taipei Medical Univ., Taiwan)

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Sung Hui Tseng (Dept. Physical Medicine Rehabilitation, Taipei Medical Univ. Hospital, Taiwan)
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Takashi Ito (Inst. Oriental Medicine, Tokyo Women's Medical Univ., Japan)
- P-157 Prescription pattern and effect on kidney of concurrent usage of metformin and Astragalus Radix on patients with type 2 diabetes in Taiwan**
Chien-tung Wu (Inst. Traditional Med., School of Med., Natl. Yang-ming Univ., Taiwan)
- P-158 A nationwide study for herbal drug safety in Korea**
Chang-Gue Son (Hepatol., Dept. Oriental Hospitals Univ. South Korea, Korea)
- P-159 Retrospective study about the effectiveness of Korean medicine treatment on 254 patients visited obesity clinic**
Yong-ho Lee (Onbody Korean Medicine Clinic, Korea)
- P-160 Adjunctive traditional Chinese medicine use reduces medical expenditure in patients with fractures in Taiwan: a nationwide population-based study**
Hou-Hsun Liao (Sch. Chinese Medicine, China Medical Univ., Taiwan)
- P-161 Prescribing patterns of concentrated extract product : Wu lin san (五淋散) for cystitis in Taiwan: A population-based study**
Steven Kuan-Hua Huan (Div. Urol. Oncol., Dept. Surgery, Chi Mei Medical Center, Taiwan)
- P-162 Ear-acupressure for primary dysmenorrhea: A systematic review**
Ching-Yi Wu (Dept. Nursing, Fooyin Univ., Taiwan)
- P-163 Quality assessment for acupuncture prevalence study at hospitals and clinics in Japan, a systematic review**
Takashi Seki (Tohoku Univ., Japan)
- P-164 The effects of acupressure massage of pulmonary diseases : A systematic review**
Hsiang-Yun Huang (Intensive Care Unit, Chi-Mei Medical Center, Taiwan)

- P-165 Research Trend Analysis on the Cold Hands and Feet Syndrome In the Field of Traditional Medicine**
 Youme Ko (Inst. Safety, Efficacy Effectiveness Evaluation Korean Med., Dept. of Preventive Med., Coll. Korean Med., Kyung Hee Univ., Korea)
- P-166 A retrospective study comparing the recurrence of chronic subdural hematoma after treatment by burr hole surgery with and without postoperative administration of goreisan (五苓散)**
 Kouichiro Okamoto (Neurosurgery, National Center for Global Health Medicine, Japan)
- P-167 The effectiveness of the quality of sleep in Qigong exercise: A systematic Review**
 Yu-Chi Lin (Dept. Nursing, Yuh-ing Junior College Health Care & Management, Taiwan)
- P-168 Development a visual algorithm to realize quantitative pulse condition: normal pulse and tight pulse**
 Chun-Jen Su (Dept. Electrical Engineering, National Cheng Kung Univ., Taiwan)
- P-169 Orally effective adjuvants from Kampo medicines enhanced mucosal immune responses for nasal influenza vaccine**
 Kazumi Yokomizo (Faculty of Pharmaceutical Sciences, Sojo Univ., Japan)
- P-170 The effects of meditation for fatigue of heart failure patients**
 Lin-Tzn Chen (Dept. Nursing, Fooyin Univ., Kaohsiung, Taiwan)
- P-171 Reduced dementia in non-hemorrhagic stroke patients received acupuncture treatment: A nationwide matched-cohort study**
 Chun-Chuan Shih (Sch. Chinese Medicine Post-Baccalaureate, I-Shou Univ., Taiwan)
- P-172 A systematic review of cinnamon in patients with diabetes**
 Mei-Su Chiang (Kaohsiung Chang Gung Memorial Hospital, Taiwan)
- P-173 Analysis among tongue and heart rate variability in obese adults and it's relationship with metabolic syndrome**
 Tsung-chieh Lee (Dept. Chinese medicine, Changhua Christian Hospital, Taiwan)
- P-174 Effectiveness of Yokukansankachimpihange (抑肝散陳皮半夏) for the Treatment of behavioral and psychological symptoms of dementia**
 Atsushi Yamamoto (Dept. Dermatol., National Hospital Organization Kobe Medical Center, Japan)

- P-175 10-minute-triage for acute headache with Goreisan (五苓散) and Goshuyutou (吳茱萸湯)**
Tadashi Matsuda (Misato Family Clinic, Japan)
- P-176 Effect of electroacupuncture at bilateral ST36 acupoints on acid saline-induced fibromyalgia pain**
Kun-Ta Lee (Grad. Inst. Acupuncture Science, China Medical Univ., Taiwan)
- P-177 Study on Body Constitution Questionnaire and Traditional Chinese Medicine Clinic for Yang-Xu Syndrome Based on Blood Clinical Variables in Sub-healthy Volunteers**
Hong-Jhang Chen (National Research Inst. Chinese Medicine, Taiwan)
- P-178 Prospective double-blind randomized study on the efficacy and safety of *Antrodia cinnamomea* combined with chemotherapy in the treatment of advanced cancer**
Ming-Yen Tsai (Kaohsiung Chang Gung Memorial Hospital, Taiwan)
- P-179 Change decoction to the paste form and cover on the umbilicus to treat a patient with rectal adenocarcinoma : A case report**
Hsiang-Wen Cheng (Chinese Medical Department, Chimei Medical Center, Taiwan)
- P-180 Yang-deficiency body constitution: A significant predictive factor for moderate to severe cancer-related fatigue**
Ming-Hsien Yeh (Grad. Inst. Chinese Medicine, China Medical Univ., Taiwan)
- P-181 Kampo therapy for peripheral neuropathy complicated with anti-cancer chemotherapy**
Akimune Hayashi (Dept. Oriental Medicine, Kampo Support Center, Kanagawa Cancer Center, Japan)
- P-182 Effectiveness of Tsuhdousan (通導散) for severe lymphedema of advanced cancer patients in palliative care**
Junichi Koeda (Aomori Jikeikai Hospital, Japan)
- P-183 Efficacy and safety of Jaungo, traditional medicinal ointment, on radiation dermatitis in patients with breast cancer: a prospective, randomized controlled, single blinded, pilot study**
Jee Young Lee (Dept. Korean Internal Medicine, Korean Medicine Cancer Center, Kyung Hee Univ. Hospital Gangdong, Korea)

- P-184 Efficacy of Kampo medicine in side effects due to hormone therapy in breast cancer patients.**
Hideki Okamoto (Japanese-Oriental (Kampo) Medicine, Chiba Univ. Grad. School of Medicine, Japan)
- P-185 *In vivo* imaging of intestinal bacterial β -glucuronidase activity via enzymatic hydrolysis of a fluorescent probe**
Ting-Yu Chen (Ph.D. Program Clinical Drug Discovery Botanical Herbs, Grad. Inst. Pharmacognosy, Coll. Pharm., Taipei Medical Univ., Taiwan)
- P-186 Develop a five element pattern of healthcare model for acute lymphatic leukemia**
Mei Hua Wang (Sch. Nursing, National Taipei Univ. Nursing Health Sciences, Taiwan)
- P-187 Utilization patterns of Chinese Medicine for cancer patients in Taiwan from 2007 to 2011 a population-based study**
Hsuan-Shu Shen (Dept. Public Health, Coll. Medicine, Tzu Chi Univ., Hualien, Taiwan)
- P-188 A case of complications from bacillus calmette-gurin immunotherapy in bladder cancer patient treated with Korean medicine**
Ji-Hye Lee (Dept. Korean Internal Medicine, Pusan National Univ. Korean Medicine Hospital, Korea)
- P-189 The effects of acupressure for lower-extremity lymphedema in cancer patients**
Su. Chin Lin (Dept. Nursing, E. DA Hospital, Fooyin Univ., Taiwan)
- P-190 A randomizedn controlled study of chan-chuang qigong for patients with non-Godgkin's lymphoma undergoing chemotherapy**
Mei-Ling Yeh (School of Nursing, National Taipei Univ. Nursing Health Sciences, Taiwan)
- P-191 The combine treatment of traditional Chinese medicine and Western medicine for dengue? An experience in Taiwan**
Yu-Pei Chen (Dept. Chinese Medicine, Tainan Hospital, Ministry Health Welfare, Taiwan)
- P-192 Ren finding of Shanghann lun (傷寒論): A retrospective crossn sectional study**
Tetsuhiro Yoshino (Center Kampo Medicine, Keio Univ. Sch. Medicine, Japan)

- P-193 Safety of daiobotanpito (大黃牡丹皮湯) in the treatment of acute diverticulitis of colon: a prospective phase II trial**
Hiroshi Koike (Center Kampo Medicine, Keio Univ. Sch. Medicine, Japan)
- P-194 The observation of humoral responses after influenza vaccination in patients with rheumatoid arthritis treated with Japanese oriental (Kampo) medicine: an observational study**
Toshiaki Kogure (Dept. Japanese Oriental Medicine, Gunma Central & General Hospital, Japan)
- P-195 Treatments of lung diseases by treating liver, kidney and spleen with Kampo medicines or traditional Chinese medicines**
Yasuyo Hijikata (Toyodo Hijikata Clinic, Japan)
- P-196 Three cases of palpitation with supraventricular or ventricular premature contraction treated successfully with Hangekobokuto (半夏瀉心湯)**
Taketoshi Yamazaki (Cardiology Center, Rakuwakai Otowa Hospital, Japan)
- P-197 An investigation of the use of acupuncture treatment in stroke patients in taiwan**
Shu-Wen Weng (Grad. Inst. Chinese Medicine, China Medical Univ., Taiwan)
- P-198 A case of treatment by ninjinto for ptialism in cerebral hemorrhagic patient**
Kazhuero Muroga (Kurokouchi Hospital, Japan)
- P-199 A case of functional dyspepsia presenting with epigastralgia that was successfully treated with Oren-gedoku-to**
Hideyuki Isobe (Dept. Orient. Integr. Med., Saitama Med. Univ.)
- P-200 The use of traditional Chinese medicines associated with reduced risk of liver cirrhosis in patients with chronic hepatitis C**
Jui-Ying Chu (Branch Linsen Chinese Medicine, Taipei City Hospital, Taiwan)
- P-201 Case report: Successful treatment of antibiotic-associated diarrhea with a herbal medicine, daiobotampito (大黃牡丹皮湯)**
Yutaka Nagata (Dept. Oriental Traditional Medical Center, Suwa Central Hospital, Japan)
- P-202 An intensive case of post-operative ileus treated with integrated medicine**
Hsiao-ling Tsou (Dept. Chinese Medicine, Chi Mei Medical Center)

- P-203 The advantages of laser acupuncture in obesity therapy**
Wen-Long Hu (Dept. Chinese Medicine, Kaohsiung Chang Gung Memorial Hospital Chang Gung Univ. Coll. Medicine, Taiwan.)
- P-204 Assessment of pre-diabetes, type 2 diabetes, and micro-vascular complications using nailfold videocapillaroscopy**
Po-Chi Hsu (Grad. Inst. Chinese Medicine, China Medical Univ., Taiwan)
- P-205 Characteristics of traditional Chinese medicine usage in children with sexual precocity: a nationwide population-based study**
Yi-Chun Lin (Dept. Chinese Medicine, China Medical Univ. Hospital, Taiwan)
- P-206 Qi-deficiency in the patients with allergic disorders**
Woo Sang Jung (Dept. Cardiology & Neurology, Coll. Korean Medicine, Kyung Hee Univ., Korea)
- P-207 Characteristics of traditional Chinese medicine users among atopic dermatitis children: a nationwide study**
Yi-Hsuan Lin (Div. Chinese Internal Medicine, Center for Traditional Chinese Medicine, Chang Gung Memorial Hospital, Taiwan)
- P-208 The relation between acupuncture points and sounds when treating children**
Taiji Misumi (Mikado Clinic, Japan)
- P-209 The efficacy and safety of periocular acupoint stimulation on myopia progression in children**
Hoyeaol Cha (Hospital of Korean Medicine, Pusan National University, Korea)
- P-210 Two cases report of Chinese herb medicine in treating children infectious aphthae ulcer**
Yi. Chiao Lee (Dept. Chinese Medicine, Kaohsiung Chang Gung Memorial Hospital, Taiwan)
- P-211 Noninvasive assessment of frailty in older patients with heart failure: the correlation between kampo-scores and “the timed ‘up and go’ test” and cardiovascular indices with doppler echocardiography.**
Kazunari Ozaki (Dept. Geriatric Medicine, Itami City Hospital, Japan)
- P-212 Characteristics of traditional Chinese medicine use in patients with Alzheimer’s disease in Taiwan: A nationwide population based study**
Ching. Yuan Lai (Sch. Chinese Medicine, China Medical Univ., Taiwan)

- P-213 Clinical efficacy of indigo naturalis to treat mild-to-moderate psoriasis : A randomized, double-blind, placebo-controlled study**
Hui-Man Cheng (China Medical University Hospital China Medical Univ., Taiwan)
- P-214 Traditional Chinese medicine treatment for acne**
Chao-Tsung Chen (Chung Yuan Christian Univ., Taiwan)
- P-215 Treatment network of Chinese herbal medicine for acne**
Hsing-Yu Chen (Div. Chinese Internal Medicine, Center Traditional Chinese Medicine, Chang Gung Memorial Hospital, Taiwan)
- P-216 Korean Medicine Treatment for 107 female patients with Genital Warts : Retrospective Chart Review**
Eun Lee (Roadledam Korean Medical Clinic, Korea)
- P-217 An improved case of excessive sweating on palms in a 6-year-old girl by use of Sanmotsuogonto**
Koki Chiba (Dept. Traditional Japanese Medicine, School of Medicine, Faculty of Medicine, Toho Univ., Japan)
- P-218 The four cases of prurigo nodularis treated with the combination of Unseiin (溫清飲) and drugs for overcoming blood stagnation.**
Hiroshi Kakuto (Dept. East Asian Traditional Medicine, Ehime Prefectural Central Hospital, Japan)
- P-219 Demographic Characteristic of Patients with Polycystic Ovarian Syndrome Using Traditional Chinese Medicine : A Nationwide Population-Based Study**
Jui-Ying Chu (Branch Linsen and Chinese Medicine, Taipei City Hospital, Taiwan)
- P-220 Integration of traditional and modern medicine strategy for improved pregnancy outcome with in-vitro fertilization embryo transfer in protein s deficiency**
Fang-I Liao (Dept. Traditional Chinese Medicine, China Medical Univ. Hospital, Taiwan)
- P-221 The clinical effectiveness of Goshakusan (五積散), a traditional chinese medicine on the prognosis of delivery of pregnant women with cold state who have been postterm**
Asako Okamura (Tsukuba Central Hospital, Obstetrics Gynecology, Japan)

- P-222 An infertile woman who managed to get pregnant by combining Keishibukuryogan (桂枝茯苓丸) with acupuncture and moxibustion therapy**
Genki Shimizu (Dept. East Asian Traditional Medicine, Ehime Prefectural Central Hospital, Japan)
- P-223 Acupuncture in Patients with Osteoarthritis of the Knee**
Pu-Wei Hou (Dept. Chinese Medicine, China Medical Univ. Hospital, Taiwan)
- P-224 Effect of traditional Japanese herbal medicines for treatment of adhesive capsulitis of the shoulder**
Keita Miyanishi (Miyanishi Orthopaedics Rheumatology Clinic, Japan)
- P-225 Clinical effect of traditional Chinese medicine on knee pain: A nationwide population-based cohort study**
Yuan-Chun Lo (Dept. Chinese medicine, Changhua Christian Hospital, Taiwan)
- P-226 The Kampo therapy for various symptoms caused by the abnormality of cervical spine**
Michihiko Hirata (Hirata Pain Clinic, Japan)
- P-227 Analgesic effect of bee venom acupuncture and its mechanism on inflammatory pain in the rat model of collagenase-induced osteoarthritis: mediation by opioid & adrenergic receptors**
Byung-Kwan Seo (Dept. Acupuncture & Moxibustion, Coll. Korean Medicine, Kyung Hee Univ., Korea)
- P-228 Chouto-San (釣藤散) might be effective to cluster headache**
Takashi Mitsufuji (Dept. Neurol., Sch. Medicine, Saitama Medical Univ., Japan)
- P-229 Clinical evaluation of atypical facial pain and atypical dental pain treated with Kampo medicines**
Kojiro Yamaguchi (Dept. Oral Maxillofacial Surgery, Kagoshima Univ. Hospital, Japan)

Others

- P-230 Method of clinical reasoning using problem lists for teaching Kampo medicine**
Makoto Arai (Dept. Kampo Medicine, Tokai Univ. Sch. Medicine, Japan)

- P-231 Postgraduate education in Japanese acupuncture: A current survey of medical residents**
Yoshinobu Nakada (Dept. Kampo Medicine, Tokai Univ. Sch. Medicine, Japan)
- P-232 Tongue image analysis for Kampo traditional pattern diagnosis – the association between tongue image and fluid disturbance pattern**
Ryutaro Arita (Center Kampo Medicine, Keio Univ. Sch. Medicine, Japan)
- P-233 Association between teeth-marked tongue and central aortic blood pressure among community-dwelling Japanese men and women: The toon health study**
Kiyohide Tomooka (Dept. Public Health Juntendo Univ. Grad. Sch. Medicine, Japan)
- P-234 Characteristics of traditional Chinese medicine use for the elderly patients in Taiwan: A nationwide population-based study**
Yuan-Ching Liao (Dept. Chinese Medicine, China Medical Univ. Hospital, Taiwan)
- P-235 A systematic review of complementary and alternative medicine prevalence studies in Japan**
Yoshihiro Kaneko (Akita Univ., Grad. Sch. Medicine, Japan)
- P-236 New evidence based on TCM-ADR platform**
Ting-Syuan Wang (Asia Univ., Dept. Photonics Communication Engineering, Japan)
- P-237 A perspective of traditional medicine on correlation between long-term temporomandibular disorders and overall quality of life**
Tae Yoon Kim (Jaseng Hospital Korean Medicine, Korea)
- P-238 Relation between the five viscera "depression" or "anger"**
Takashi Masanori (Tokai Univ. Oiso Hospital, Japan)
- P-239 Pro-bone and anti-fat effect of arginine by the regulation of Wnt/ β -catenin signaling pathway in human bone marrow mesenchymal stem cells**
Seunghoon Lee (Kyung Hee Univ. Korean Medicine Hospital, Korea)
- P-240 A traditional herbal medication, Maekmoondong-tang, for cough: A systematic review and meta-analysis**
Kwan. Il Kim (Dept. Clin. Korean Medicine, Coll. Korean Medicine, Kyung Hee Univ., Korea)

- P-241 Inhibitory effects of Cheongsangbangpoong-tang on both inflammatory acne lesions and facial heat in patients with acne vulgaris: A randomized controlled trial protocol**
Kyuseok Kim (Dept. Ophthalmol. Otolaryngol. Dermatol., Coll. Korean Medicine, Kyung Hee Univ. Korean Medicine Hospital, Korea)
- P-242 Protective effect of Yeoldahanso-tang on radiation-induced oral mucositis in mice**
Kwang Seok Ahn (Dept. Sci. Korean Medicine, Coll. Korean Medicine, Kyung Hee Univ., Korea)
- P-243 Electro-acupuncture to treat gastroesophageal reflux disease: A study protocol for a randomized, patient and assessor-blinded, sham-controlled trial**
Gajin Han (Korean Medicine Clinical Trial Center, Kyung Hee Univ. Korean Medicine Hospita)
- P-244 Efficacy and safety of Myofascial-meridian Release Acupuncture (MMRA) for chronic neck pain: a study protocol for randomized, patient- and assessor-blinded, sham controlled trial**
Seunghoon Lee (Dept. of Acupuncture & Moxibustion, Kyung Hee Univ. Korean Medicine Hospital, Korea)
- P-245 The suggestion of standard process in developing the questionnaire of pattern identification**
Eunsu Jang (Coll. Korea Medicine, Daejeon Univ., Korea)
- P-246 Effect of acupuncture for radioactive-iodine induced anorexia in thyroid cancer patients: A randomized double blinded sham controlled pilot study**
Ju-Hyun Jeon (Dept. Acupuncture & Moxibustion, Daejeon Korean Medicine Hospital, Daejeon Univ., Korea)
- P-247 Reliability and validity analysis of the instrument on pattern identifications for depression**
In Chul Jung (Dept. Oriental Neuropsychiatry, Coll. Korean Medicine, Daejeon Univ., Korea)
- P-248 The choice factors of korean medicine in middle and old age population: Focusing on pain region and level**
Hye Kyoung Jang (Clin. Trial Center in Daejeon Univ. Dunsan Korean Medicine Hospital, Korea)

- P-249 Control of restraint stress-induced depressive-like behaviors and corticosterone-induced neuronal damages by So-ochim-tang-gamibang, a Korean herbal medicine**
Jung Eun Choi (Coll. Korean Medicine, Daejeon University, Korea)
- P-250 Effects of Shinchubogun-tang on symptom reduction in patients with intervertebral lumbar disc herniation: a retrospective observational study**
Eun Jung Lee (Coll. Korea Medicine, Daejeon Univ., Korea)
- P-251 An attempt to evaluate traditional Chinese medicine treatments in the update of Japan Geriatrics Society guidelines**
Koh Iwasaki (Center Traditional Chinese Medicine Home Healthcare, Southern Tohoku General Hospital, Japan)

Special Lecture

SL-1

Japan Society for Oriental Medicine (JSOM):

history and prospects

Hiroshi Sato

(Japan Society for Oriental Medicine)

Chair: Shuji Ohno (Ohno Clinic, Japan)

13:05 – 14:00 on April 16 (Sat.)

Room A1

SL-1

Japan Society for Oriental Medicine (JSOM): history and prospects

Hiroshi Sato

President of Japan Society for Oriental Medicine

The Japan Society for Oriental Medicine (JSOM) was established in 1950, when it was initially known as the Japan Oriental Medical Society. It grew from the proposal by Dr. Kazuo Tatsuno to form an academic society, whose aim would be to establish a scientific basis for oriental medicine, and which would become eligible to be a member of the Japanese Association of Medical Science (JAMS), which was established in 1902 as one of the major medical societies in Japan. Indeed, in 1991 JSOM was invited to become a member of JAMS, thus achieving a major goal of the Society's membership.

When JSOM was first established, it had about 100 members. The membership rapidly increased, reaching 8,669 in 1989, when the society introduced a medical specialist certification program in Kampo medicine. At present, the number of members is about 9000, including more than 2000 certified physicians.

Major activities of JSOM include: (1) holding scientific meetings and publishing the journals "Kampo Medicine" (in Japanese) and "Traditional & Kampo Medicine" (in English), as well as other publications; (2) operating the medical specialist certification program of JSOM; (3) supporting clinical research relating to oriental medicine; and (4) collaborating with related institutions in Japan and foreign countries.

Since 2005, JSOM has been a member of the Japan Liaison of Oriental Medicine (JLOM) and is playing an active part in international efforts to develop standards for traditional medicine (ISO/TC249) and a unified international classification of diseases (WHO/ICD-11). JSOM is also continuing to support and encourage scientific studies aimed at developing evidence-based, standardized Kampo medicine.

President Lecture

PL

The Role of Kampo medicine in treating rheumatic diseases

Shuji Ohno

(Ohno Clinic)

Chair: Lee Eungse (Secretary General of ISOM, Korea)

9:00 – 9:55 on April 17 (Sun.)

Room A1

The role of Kampo medicine in treating rheumatic diseases

Shuji Onho

Ohno Clinic, Ogawa-cho, Saitama, Japan

Recently, an increasing number of reports are being published regarding the use of Kampo medicine in the treatment of rheumatic diseases. I, too, have been involved in such investigations. First, I decided to examine whether the co-administration of Boiogito (防已黃耆湯) and methotrexate (MTX) had benefits of efficacy, economy or both. My investigations suggest that the use of Boiogito represents a clinically and economically important supplement to MTX therapy in the treatment of Rheumatoid Arthritis. Second, I wanted to observe any changes in disease states that might result from supplementing corticosteroids with Kampo medicines. This talk will cover these results in a side-by-side comparison with the results from stand-alone corticosteroid treatment. To list just a few examples of Kampo medicines' usefulness, Keishibukuryogan (桂枝茯苓丸), Jiinkokato (滋陰降火湯) and Bakumondoto (麥門冬湯) have been reported to increase salivary secretion and improve the immunological disorders of patients with the dry eyes and mouth associated with Sjögren's syndrome. Based on several of my case findings, Kampo medicines used both individually and as supplemental therapy resulted in the remission of SLE and other rheumatic diseases. Other of my findings show that Saireito shortened the active phase of SLE, allowed a reduction in the volume of corticosteroids administered, and lowered the incidence of adverse reactions, including increased hepatic transaminases. In another area of investigation, I have focused on the correlation between corticosteroid treatment and Kampo diagnoses. Those findings, too, are presented herein. They suggest that there is a significant correlation between the daily dosage of prednisolone (PSL) and 'Suidoku (水毒)' score, and between the total dosage of PSL and 'Oketsu (瘀血)' score. Another of my research findings indicates that Saireito (柴苓湯) has an effect on T-lymphocyte subpopulations, directing the clinical course toward a more healthy state. Finally, I discuss a couple of very interesting cases involving Mixed Connective Tissue Disease and Polymyositis.

Invited Lectures

IL-1: Dr. Yen's Kampo medicine: Survey of traditional Chinese medicine in diagrams and tables

顏 焜榮 / Kun-Ying Yen

(Taipei Medical University, Taiwan)

Chair: Tetsuo Akiba, Japan (Akiba Clinic, Japan)

9:00 – 9:55 on April 16 (Sat.), Room A1

IL-2: Integration of Oriental Medicine into medical care of cancer patients in the US

Gary Deng

(Memorial Sloan-Kettering Cancer Center, USA)

Chair: Shuji Ohno (Ohno Clinic, Japan)

10:00 – 10:55 on April 17 (Sun.), Room A1

IL-3: Challenges and opportunities in the advancement of Korean medicines

Lee Hyejung

(Korea Institute of Oriental Medicine [KIOM])

Chair: Claudia Witt (Univ. of Zurich, Switzerland)

11:00 – 11:55 on April 17 (Sun.), Room A1

IL-4: Heal the body by treating skin

Fumino Ninomiya

(Aoki Clinic, Japan)

Chair: Yoko Kimura (Tokyo Women's Medical Univ., Japan)

16:05 – 16:35 on April 17 (Sun.), Room A1

IL-1

Prof. Yen's Kampo medicine: Survey of traditional Chinese medicine in diagrams and tables

Kun-Ying Yen

Graduate Institute of Pharmacognosy, College of Pharmacy,

Taipei Medical University, Taipei, Taiwan

Background. Recently, Chinese Medicine has captured a lot of attention in the world. While modern medicine is plagued by problems with side-effecting pharmaceuticals and many new and seemingly incurable diseases, the world is beginning to look at the astonishing benefits of Chinese medicine for possible solutions. Many diseases are not yet effectively controlled or treated by standard medical practice. International usage of the time-honored traditional Chinese medicine herbs has been found to possess potent pharmacological activity but with less side effects. This generates a wave of public enthusiasm, researches and recognition of Chinese medicine as a fully developed therapeutic modality in the established medical world.

Results.

1. Diagnosis According to Shanghan Theory (傷寒理論之診斷論)

Diagnostic interview and pulse diagnosis using eight principles and six meridians (八綱・六經)

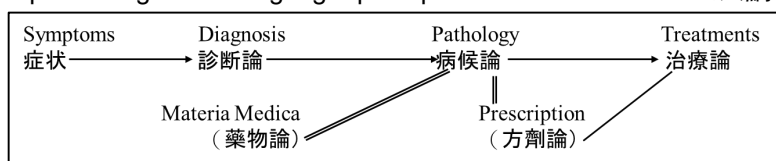


Figure. 1 Diagram of the Clinical Methodology of Chinese Medicine

1-1. Diagnostic interview 主訴主體之問診

Eight Principle Classification (八綱)–Exterior/Interior (表裏)–Heat/Cold (熱寒) –Excess/ Deficiency (實虛) –Yin/Yang (陰陽)

1-2. Factors for deciding the progression of disorder: 表裏決定順序:

Pain (痛苦), Type of fever (熱型), Pulse (脈狀), Tongue (舌苔)

2. Disorders Systematically Difference between Western Medicine and Traditional Chinese Medicine (中西醫診斷差異)

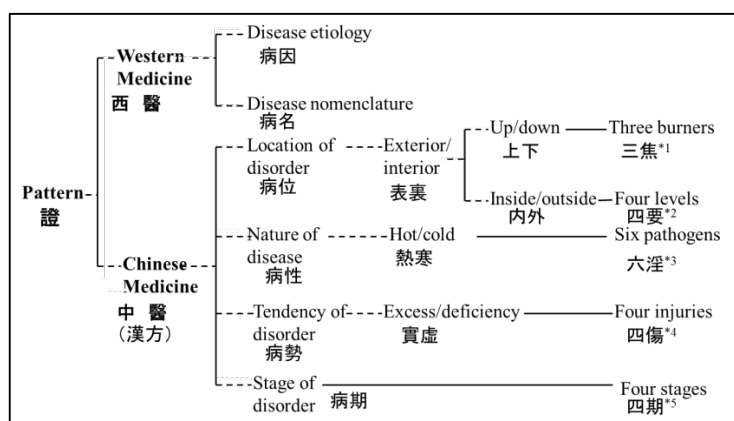
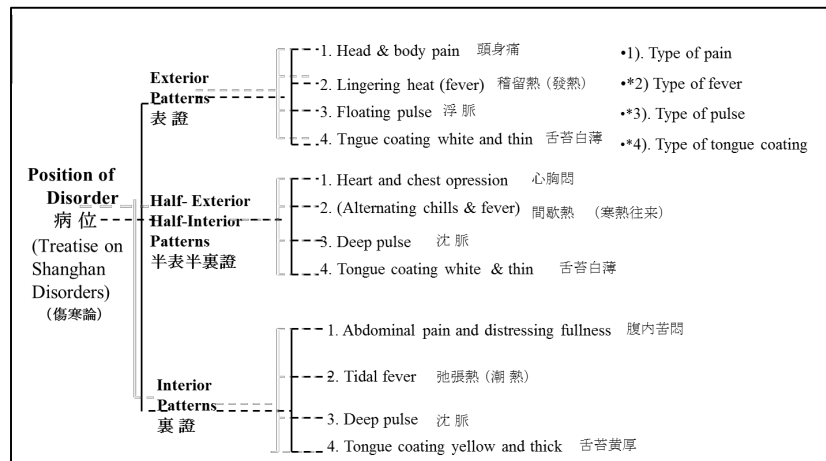


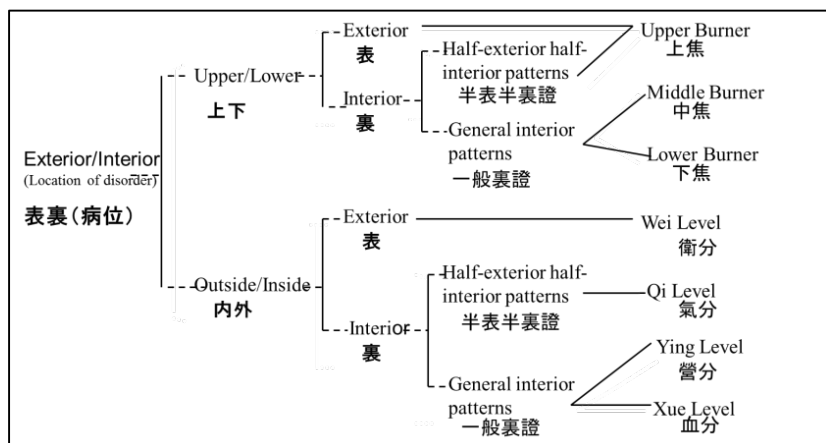
Figure. 2 General Summary of Disorders Systematically Arranged

***1. Three Burners:** Upper burner, middle burner, lower burner; ***2. Four Levels:** Wei level, qi level, ying level, blood level; ***3. Six Pathogens:** Wind, cold, summer heat, fire, damp, and dry pathogenes; ***4. Four Injuries;:** Qi injury, blood injury, phlegm injury, stagnation injury; *** 5. Four Stages:** Aversion to cold, transforming heat, ying penetration, and yin injury stages.

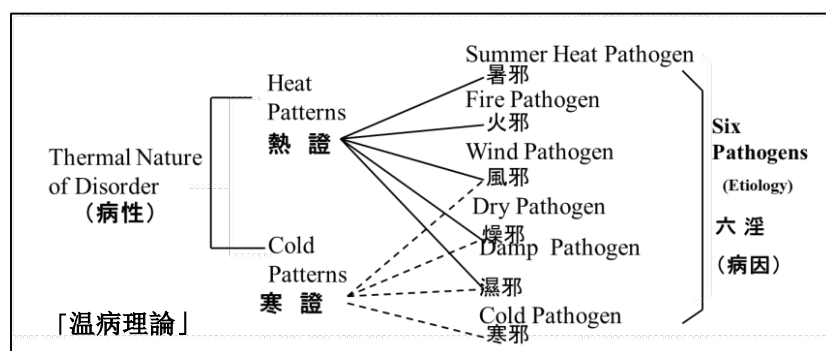
2-1. Classification of the Location of Disorders (病位的分類)



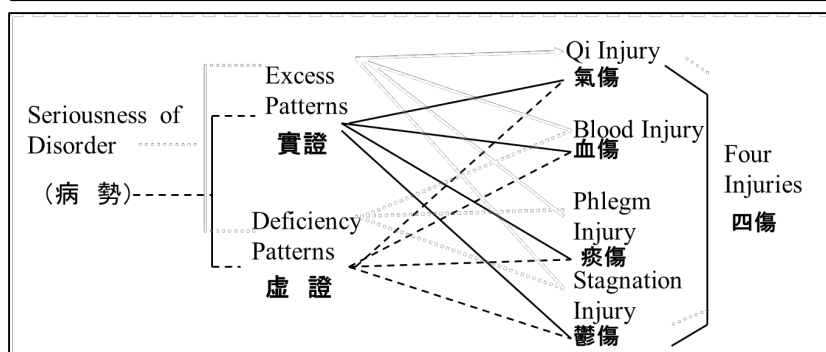
2-2. Relationship between locations and stages of disorder (病位和病期)



2-3. Relationship of Nature of six pathogens and disorder (病性和六淫關係)



2-4. Relationship of four injuries and tendency of disorder (病勢和四要關係)



IL-2

Integration of Oriental medicine into medical care of cancer patients in the US

Gary Deng, MD, PhD

Medical Director of Integrative Medicine, Memorial Sloan Kettering Cancer Center

Integrative oncology incorporates some of the Eastern medicine approaches and therapies into Western mainstream cancer care. It emphasizes treating the patient as a whole person and focus on reducing symptoms, strengthening resilience and promoting wellbeing. Despite the long history of use of many such therapies, a gap exists between the current level of scientific evidence and what we need to know in order to provide evidence-based advice. Many major cancer centers in the United States have established integrative medicine programs to address cancer patients' need of taking advantage of these therapies during cancer treatment. Comprehensive clinical services are made available to cancer patients. Research programs have been developed to conduct rigorous scientific studies of botanical agents, acupuncture, mind-body therapies, etc. Various educational programs have also been in place to educate health care professionals involved in cancer care. Here Dr. Deng will review clinical, research and educational activities of integrative oncology in the United States, describe the current state of science, discuss progress achieved and obstacles encountered, and explore prospects of further integration with conventional oncology practice.

IL-3

Challenges and opportunities in the advancement of Korean medicines

Lee Hyejung

*Korea Institute of Oriental Medicine, 1672 Yuseong-daero, Yuseong-gu, Daejeon, 34054,
Republic of Korea*

Korean medicine (KM) is a popular source of health care in South Korea that has been passed down from generation to generation for the centuries, as an integral part of common culture practices and beliefs. It is the medicine native to Korea developed distinctively from traditional Chinese medicine (TCM) while influenced by it. KM developed its own unique diagnostic and treatment features, such as Sa-am acupuncture (舍岩鍼法), Tae-guk acupuncture (太極鍼法), Hand acupuncture, and Sasang Constitutional Medicine (四象體質醫學). Over the last few decades, there have been considerable achievements in the field of KM. These include illumination of evidence-based scientific effects, objectification of diagnostic principles, and standardization of therapeutic technologies.

Recently, KM has been facing severe challenges resulting from the changes of healthcare environment. They are closely associated with low birth rate, rapidly aging population, prevalence of chronic/incurable diseases, and occurrence of new types of infectious diseases. Healthcare paradigm is being shifted from treatment-centered therapy to prevention-centered therapy. Nowadays, medical consumers can take care of their health every day and anywhere using innovative ICT platforms.

KM also has great opportunities for playing a significant role in contributing to healthy life under those environments. There have been an increase of public interest in preventive medicine and a proactive engagement of medical consumers in their medical consumption. Along with the changes of public awareness and consuming pattern, KM has been receiving more attention than ever before as an alternative therapy against incurable or chronic diseases. Moreover, Korea has selected healthcare and senior-friendly industries as governmental key featherbed industries to drive “Creative Economy” of the Park Geun-hye administration, and “KM Globalization” is selected as a national political agenda.

Taken together, KM should move toward establishing evidences of efficacy and safety of its clinical practices, developing highly specialized manpower with skills and experience, and strengthening international cooperation. We propose that KM should ultimately pursue “advanced medicine” through the combination with western medicine, and with other kinds of cutting-edge technologies such as stem cell biology, systems biology, and epigenetics

IL-4

Heal the body by treating skin

Fumino Ninomiya¹, Yasuo Itoh², Naomi Sakai³

¹*Aoki Clinic, 4-17, Chuochō, Atami City, Japan*

²*Kyorin Wako Pharmacy, 3-4, Himeikedori, Chigusaku, Nagoya City, Japan*

³*Kemistomuto Pharmacy, 2-2-3, Daiko, Higashiku, Nagoya City, Japan*

Background. I have performed a lot of surgery as a plastic surgeon. Although surgical protocols are fairly standard, post-operative results can differ. One reason for this appears to be in the circulation of qi (a kind of vital energy) on the surface of skin.

Objectives. The meridians on the surface of the skin has the function to circulate qi. The meridians routes are Invisible.

When scarring occurs after injury or surgery, the flow of qi is interrupted and produces many different disease states. If stiff scars can be softened and recover good circulation of qi, these diseases can be improved and even healed.

Methods. To promotes circulation of qi which was interrupted at stiff scars, a small amount of triamcinolone acetonide (KENACORT: 5 fold dilution) was injected into stiff scars produced by various reasons including after operation.

KENACORT injection were carried out for three cases with skin diseases, three cases with digestive system disorder and two cases with movement disorder

Results. The triamcinolone acetonide injection to scars is associated with improvement of three cases of dermatitis, three cases of digestive system diseases and two cases of movement dysfunction.

Discussion. Good circulation of qi on meridians was obtained by softening scars with KENACORT injection. This will be the reason of improvement of various diseases including skin diseases, digestive system diseases and movement disorders. Good circulation of qi will lead to good circulation of qi in the internal tissues which will extinguish various morbidity.

Conclusions. Skin has the power to protect the body from harmful external stimuli. When qi circulation on the skin is interrupted, for instance by a scar, internal organs are more prone to disease. Softening formed scar such as by injection of triamcinolone acetonide, can mitigate damage to qi circulation and keep internal organs free of disease.

The First Japan-Germany Joint Symposium on Kampo Medicine and Acupuncture

**(This event is semi-closed event, and the participants of 18th ICOM
can attend as observer who can not talk)**

(Sponsored by Goto College of Medical Arts and Sciences)

**14:00 – 18:00 on April 15 (Fri.)
Room A1**

Opening remarks: Yoshiharu Motoo & Heidrun Reissenweber-Hewel

Session 1. Structure and characteristics of Kampo Medicine

Chair: Klaus Hambrecht

Speaker: Masayuki Kashima (30 min)

Commentator 1: Ulrich Eberhard

Commentator 2: Bernd Kostner

Discussion (30 min)

Coffee/Tea break (8 min)

Session 2. Concept on active ingredients of crude drugs used in Kampo Medicine

Chair: Sven Schroeder

Speaker: Toshiaki Makino (30 min)

Commentator 1: Silke Cameron

Commentator 2: Kenny Kuchta

Commentator 3: Hans Rausch

Discussion (30 min)

Coffee/Tea break (8 min)

Session 3. Clinical trial on acupuncture

Chair: Den'ichiro Yamaoka

Speaker: Claudia Witt (30 min)

Commentator 1: Hitoshi Yamashita

Commentator 2: Takashi Seki

Discussion (30 min)

Closing remarks: Yoshiharu Motoo & Heidrun Reissenweber-Hewel

Session-1

Structure and characteristics of Kampo medicine

Masayuki Kashima

Department of General Internal Medicine, Kumamoto Red Cross Hospital, Japan

It is able to say that Kampo medicine is the most unique progression medical systems in the East Asian traditional medicines originated from ancient Chinese medicine. The characteristics to be emphasized of Kampo medicine are HOUSYOU-SOUTAI (方証相對) system (prescription directly link to symptoms and signs), more detailed analysis of pathophysiology and medical action in traditional Chinese medical words than Chinese, and the Unitary medical system that a doctor having one license uses Kampo and Western medicine. HOUSYOU-SOUTAI system which was established by Toudo Yoshimasu (吉益東洞) in the Edo period, is that the prescription is directly leaded from symptoms and signs, without using theory of etiology, pathophysiology or pharmacology. If the arbitrary combination choice was from a plurality of symptoms and signs, there are the large amounts of choices of prescription in this way. To solve the problem, the abdominal finding is placed to the key diagnostic valuable sign. The abdominal examination (腹診) has been developed highly. In the complicated or including a lot of systems disorder case, when there are some choices of prescription, the method is frequently used that the classifications which are consisted of some symptoms and signs, are linked to some prescriptions, are intervened between clinical findings and prescriptions, and help to choice the prescription. In this method, using some classifications, it is able to narrow downs the choice of prescription belonging to plural classifications. HOUSYOU-SOUTAI system let to accumulate experiences limited number prescriptions therapy the various conditions, discover the new using way of the prescription unlimited by traditional theory, prompt to verify the traditional Chinese medicine's theories. There is another the way of thinking in Kampo medicine, which is more detailed analysis of pathophysiology and medical action in traditional Chinese medical words than Chinese, being located in the opposite pole of HOUSYOU-SOUTAI.

Traditional Chinese medicine has the character summarizing and explaining, the concrete biological phenomenon by the highly abstractive concepts, for example, In-Yan (陰陽), surface-inside (表裏) etc. This type thinking is difficult to understand for not only another culture area member feeling about disregarding the abstraction level, but also Japanese who had long term to acquire Chinese culture. The way of thinking in Japan which uses traditional Chinese medical theory shows more concretely "where is", "what is", "how to" play the role closely connected to each symptoms in the pathophysiology or the pharmacology than Chinese and points out the contradict points of the modern Chinese medicine. These Kampo styles play a good navigator of learning the traditional Eastern oriental medicine for not Chinese culture area people. Kampo medicine which is based on these styles is practiced by the doctor who acquired the the Western medicine in the Unitary medical system. Today, over 90% Japanese doctor use the Kampo prescription based on the

wide range thinking styles form only the western medicine style diagnosis to the Kampo theory, therefore, the Kampo medicine is the most established alternative and complementary medicine. In addition, the Kampo medicine used by a doctor, can play the interactive role of the Western medicine beyond only an alternative or complementary role, and provides the tight-knit medical system.

Session-2

Concept on active ingredients of crude drugs used in Kampo medicine

Toshiaki Makino

Dept. Pharmacognosy, Grad. Sch. Pharm. Sci., Nagoya City University, Japan

Since ancient times, human beings have used natural substances as crude drugs to treat various diseases. In modern pharmaceutical sciences, chemists have isolated the active ingredients (compounds) from these natural substances used as medicines, and these ingredients (compounds) have developed as chemical drugs. For example, morphine, a chemical compound that has 285.34 g/mol molecular weight, was isolated from opium poppy in 1803, and has been used as narcotic drug to reduce severe pain in cancer patients. Digoxin, another compound that has 780.938 g/mol molecular weight, was isolated from the leaves of *Digitalis purpurea* (foxglove) in 1875, and has been used as a cardiotonic drug to prevent e atrial fibrillation and atrial flutter. Instead of the use of active ingredients (compounds) as chemical drugs, original natural substances have not been used as crude drugs. We can not find opium or digitalis leaf but can find morphine or digoxin In the present pharmacopoeia.

However, in traditional medicine, we are still using crude drugs as medicines. Although ephedrine was isolated from the stem of *Ephedra sinica* (*Ephedra Herba*, 麻黄) in 1885 and has been used as bronchodilator in modern medicine, we have still been using *Ephedra Herba* as a crude drug in traditional Oriental medicine to dispel the exterior evil in body surface with pungent taste and warm nature (辛温解表薬). In the textbook of pharmacognosy (生薬学), *Ephedra Herba* is used as a bronchodilator, and its active ingredient is ephedrine, since pharmacognosy belongs to modern science (Western medicine). Indeed, ephedrine is one of the active ingredients (compounds) of *Ephedra Herba* to treat bronchial asthma, *Ephedra Herba* may contain other active ingredients than ephedrine to dispel the exterior evil in body surface. In another example, we knows the active ingredient of *Rhubarb* (the rhizome of *Rheum palmatum*, 大黄) exhibiting laxative is sennoside A, but in traditional Oriental medicine, 大黄 is used not only as a laxative but we use to activate blood to dissipate blood stasis (活血化瘀) and to remove interior heat (清热). When we use *Rhubarb* to dissipate blood stasis, we can recognize that sennoside A is not the active ingredient but the causative agent of diarrhea as an adverse effect.

When we use the term “active ingredients”, the meaning of the term should contain both information of the names of chemical compounds and some efficacies. In usual, the pharmacognosists find the active ingredients of crude drug extracts by activity-guided fractionation using some pharmacological experiments. Although we can confirm the pharmacology in modern medicine (薬理), such as antipyretic, cardiotonic, bronchodilator, or laxative, by conducting pharmacological experiments, it is very difficult to confirm the pharmacology in traditional medicine (薬能), such as dispelling the exterior evil or activating blood and dissipating blood stasis, or removing interior heat, by experimental pharmacology, because the experimental animals do not exhibit about their symptoms in traditional medicine, and we can not measure or analyze the

term “evil” or the efficacies by mechanical instruments. Unless the philosophy of the pharmacology in traditional medicine is translated into modern science, we can not use the term “active ingredient” of crude drugs in traditional medicine.

Why we have to learn the ingredients (chemical compounds) in crude drugs? The reason is to maintain the quality of crude drugs. Since crude drugs have higher values of medicinal efficacies than foods in natural substances, and since general people can not recognize or identify the quality of crude drugs, it is easier to distribute the counterfeits or shoddy goods. Indeed, crude drugs are derived from natural substances that usually have large individual differences and diverseness. As the drug, the pharmacists have to prepare crude drugs with the stable qualities, and the individual differences of crude drugs should be regulated in the minimum levels all of the time. Then, we can use the characteristic chemical compounds in the crude drug as the marker compounds to identify the origin or to maintain the quality of the crude drug. Though sennoside A is not the active ingredient of Rhubarb in traditional medicine, this compound is one of the characteristics of Rhubarb and can be used as the marker of Rhubarb, i.e. the stable content of sennoside A among a number of batches of Rhubarb can warrant the quality of Rhubarb, though we do not know the genuine active ingredient of Rhubarb in traditional medicine.

In summary, in the textbook of pharmacognosy or *Materia Medica* describing crude drugs or herbal medicines from natural substances, the chemical compounds in crude drugs are not always described as the active ingredients. Especially in traditional Oriental medicine, we can not determine the active ingredients in crude drugs. We have to recognize the differences of the concepts of active ingredients and marker compounds in pharmacognosy, and the most of ingredients of crude drugs described in the textbook of traditional Oriental medicine are not the active ingredients but the marker compounds.

Session-3

Clinical research on acupuncture – What can we learn from the efficacy effectiveness gap?

Claudia M. Witt, MD, MBA, Professor and Chair

*Institute for Complementary and Integrative Medicine, University of Zurich and
University Hospital Zurich, Switzerland, claudia.witt@uzh.ch*

To date, most clinical studies on acupuncture have focused on the specific effects of single treatment components such as point location, needling and needle stimulation.

However, acupuncture can be viewed as a multi-component treatment that also includes many other aspects such as palpation of the points and patient doctor interaction. Furthermore, most clinical trials included highly selected patients and applied standardized treatment protocols with the aim to exclude as much bias as possible. These studies have contributed important information on the efficacy of acupuncture; however, their results are only marginally helpful to understand the value of acupuncture in a more usual care context. The current movement to Comparative Effectiveness Research (CER) in conventional medicine fosters the generation and synthesis of evidence that compares the benefits and harms of different treatments in a more typical setting. CER has considerable potential to help health care providers as well as patients and clinicians to choose among currently available therapeutic options including acupuncture. CER compares two or more health interventions in order to determine which of these options works best for which types of patients in settings that are similar to those in which the intervention will be used in practice. This evidence, more generalizable than the evidence generated by traditional randomized controlled trials, is better suited to inform real-world care decisions. CER uses a broad spectrum of methodologies including randomized pragmatic trials. Creating a modern, strategic research framework that takes into account the stakeholders' perspectives, follows a patient-centered approach, uses mixed methods research methodologies, and combines modern scientific techniques such as systems-biology-based 'omics technologies would be beneficial for bridging the gap between traditional medicine theory and modern clinical research methodologies.

In most areas of integrative medicine data on comparative effectiveness is scarce, but available acupuncture research already contributes to CER evidence. This presentation will provide an overview about the evidence from clinical research perspective. It will address factors that moderate the treatment outcome, discuss advantages and limitations of previous studies and make suggestions for future research. Furthermore it will introduce CER, show examples from acupuncture research and make suggestions for future research.

Literature

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Acupuncture Symposium

(Sponsored by Seirin Co. Ltd.)

Chair: Hitoshi Yamashita (Morinomiya Univ. of Medical Sci., Japan)
and Benjamin Chant (Australia)

10:00 – 11:55 on April 16 (Sun.)
Room A1

S1-1 Moxibustion treatment in Korea

Dongwoo Nam (Kyunghee University, Korea)

**S1-2 The effects of moxibustion on the obese adolescent girls –
Taiwanese experience**

Tse-Hung Huang (Taiwan)

**S1-3 Modern clinical application of moxibustion rooted in the local
community: Ehime Prefectural Central Hospital's policy and
methods**

Akio Manabe (Ehime Prefectural Central Hospital, Japan)

**S1-4 An Australian acupuncturist's perspective of moxibustion practice
in East Asian countries**

Benjamin Chant (Univ. New England, Armidale, Australia Australia)

S1-1

Moxibustion treatment in Korea

Dongwoo Nam

Department of Acupuncture & Moxibustion, Korean Medicine hospital,

Kyung Hee University. Seoul, Korea

First, I would like to introduce to you many different types of moxibustion devices and methods used in Korea. Not only traditional moxa cones for the use of direct and indirect moxibustion therapy, but also various types of moxibustion devices are used in Korean Medicine Clinics and hospitals. There are types of moxibustions such as charcoal moxa, stone moxa, bamboo moxa, smokeless moxa, sticker moxa, thread moxa and devices such as yellow soil moxa, large sized moxa device, electrical or laser moxibustions devices and so on.

Then I will introduce to you some recent clinical studies and systematic reviews published in Korea. The studies were about, the moxibustion effect of reducing fat, treating acute herpes zoster, reducing knee pain, improving primary dysmenorrhea and so on. As for clinical studies, there was a study comparing electric moxibustion and traditional moxibustion on how different the temperature of the skin surface changes, also a study about developing a sham moxibustion device was found. Some other studies investigated the effect of moxibustion in treating parkinson's disease, arthritis and other various medical conditions.

Finally, I will like to introduce to you some moxibustion prescriptions we use for patients in daily life, who need to enhance their immunity and who would like to prevent diseases and maintain their health.

Key words: Moxibustion, Korean medicine, review, clinical study, prevention of diseases

S1-2

The effects of moxibustion on the obese adolescent girls – Taiwanese experience

Tse-Hung Huang^{1,2,3}, Yuan-Chieh Yeh^{1,4},

¹*Department of Traditional Chinese Medicine, Chang Gung Memorial Hospital, Keelung, Taiwan.*

²*Graduate Institute of Clinical Medicine Sciences and School of Traditional Chinese Medicine, Chang Gung University, Taoyuan, Taiwan.*

³*Graduate Institute of Integration of Traditional Chinese Medicine with Western Nursing and School of Nursing, College of Nursing, National Taipei University of Nursing and Health Sciences, Taipei, Taiwan.*

⁴*Program in Molecular Medicine, National Yang-Ming University and Academia Sinica, Taipei, Taiwan.*

Background. Adolescent obesity is considered a major health issue worldwide since it is a strong connection with various diseases. Among young girls, being overweight or obese is also involved both physical and psychological problems major psychological problem.

Methods. We conducted a randomized controlled trial of moxibustion by moxa burner as compared with a control intervention composed of encouraging drinking water. 54 eligible participants aged 15-18 with a BMI greater than 25.3 were enrolled, and were randomly allocated equally to treatment group (N = 27) and control group (N = 27). Sessions took place three times a week for 8 weeks (a total of 24 treatments). The moxibustion was applied to acupoints at RN12, RN6, ST25, ST36 and SP6. The physical assessments included changes in the BMI, waist to hip ratio (WHR), and body fat ratio (BFR). The psychological outcomes were measured by Rosenberg Self-esteem Scale (RSE). All data were collected in the beginning of the study (baseline), week 4, and week 8.

Results. Of the 54 randomly assigned participants, 46 completed the trial. The BMI changes from baseline between treatment group and control group was 0.097 ($p = 0.655$) at week 4, and -0.794 ($p = 0.001$) at week 8. A significant decrease in WHR after 4 weeks intervention was observed in the treatment group compared to control group, with a -0.011 ($p = 0.017$) mean change from baseline, and a -0.035 ($p < 0.001$) mean change from baseline at the end of week 8. On the other hand, the treatment group had a slightly decrease BFR of -0.253 ($p = 0.474$) mean change from baseline at week 4, and a significant change of -2.068 ($p < 0.001$) from baseline compared to control group was observed at the end of week 8. In the psychological assessment, the score of RSE showed a slightly increase of 0.155 points ($p = 0.803$) at week 4, and a significant improvement of 1.606 points ($p = 0.021$) than the improvement in the control group at week 8. No obvious adverse effect was reported during the entire 8 weeks intervention.

Conclusions. Moxibustion by moxa burner may be an effective and safe intervention for obese adolescent girls to benefit both physically and psychologically.

S1-3

Modern clinical application of moxibustion rooted in the local community:

Ehime Prefectural Central Hospital's policy and methods

Manabe A¹, Okawa Y¹, Otsuka M¹, Yamami T¹, Shimizu G¹, Kakuto H¹, Yamaoka D^{1,2}

¹*Department of East Asian Traditional Medicine, Ehime Prefectural Central Hospital, 83 Kasugamachi, Matsuyama City, Ehime, 790-0024, Japan*

²*Department of Internal Medicine, Ehime Prefectural Niihama Hospital, 3-1-1 Hongo, Niihama City, Ehime, 792-0042, Japan*

The history of moxibustion in Ehime prefecture is a long one, extending back as far as 1,200 years before Kukai (Kobo-Daishi: 774-835 A.D.: Born in Tado County, Sanuki Province—modern-day Zentsuji, Kagawa Prefecture) established the 88-temple Shikoku Pilgrimage. Kukai, who was dispatched as an envoy to Tang China, brought back teachings of subjects such as Esoteric Buddhism and medicine. Among the ideas brought back was "moxibustion therapy," and Kukai visited the various provinces of Japan, spreading the technique in order to treat the illnesses of the people and improve their quality of life. This is why the custom of moxibustion for the prevention and treatment of maladies lives on today in Shikoku and western Japan. In addition, pilgrims, making the Shikoku Pilgrimage to the 88 temple sites designated by Kukai during his time in Shikoku, engaged in the practice of administering and receiving moxibustion with local residents and while on the road to help ensure their continued health during the pilgrimage, and this is believed to be the reason that the practice of moxibustion became well-known and practiced in the area.

Furthermore, until 40 years ago, Ehime Prefecture was engaged mainly in primary industry. It was common to live and work together as a large family, putting all available energy into the work at hand, and where the family head engaged in moxibustion, it was common for the children and grandchildren to do so as well, and it seems that in this way moxibustion became a part of everyday life.

Moreover, against the background of the Japan-China Treaty of Peace and Friendship entered into by Japan and the People's Republic of China in 1978, the governor of Ehime prefecture at the time, who was deeply impressed by China's acupunctual anesthesia and highly developed traditional medicine, established in 1979 a center for research into Oriental medical treatment as a facility of a public hospital. Over the past 36 years, around 22,000 citizens of Ehime prefecture have undergone moxibustion treatment.

One characteristic feature of the treatment is that the patient's entire life history and medical history are recorded in a chronological analysis table. The chronological analysis table is then classified into various stages in order to gain an understanding of the connection between the outbreak of the health disorder and events in the person's life.

At this treatment room, we employ 14 classification patterns in order to grasp how health disorders came about. We believe that the outbreak of chronic health disorders is caused either by one, or by a combination of 2 or more of these 14 types. Chronological analysis is employed with the goal of not only improving the patient's current condition, but also of preventing future outbreaks of the health disorder as a result of events in the patient's life.

We call this method of attempting to gain an understanding of the true nature of the disease 'chronological analysis interview'.

S1-4

An Australian acupuncturist's perspective of moxibustion practice in East Asian countries

Benjamin Chant^{1,2}

¹*Morinomiya University of Medical Sciences, Osaka, Japan*

²*University of New England, Armidale, Australia*

The use of moxibustion in Australia is primarily based on the philosophical concepts, diagnostic methods and treatment principles of Traditional Chinese Medicine. Moxibustion tools are generally limited to moxa sticks which are used indirectly by applying heat to cold or painful locations or warm needling moxibustion which has the intention of activating point actions and indications. Raw coarse moxa floss may be used in moxa burners for warming large areas or rolled into balls for warm needling moxibustion. Although rarely performed, coarse moxa floss may also be shaped into large cones and applied to the abdomen with an insulating material such as garlic or ginger. Moxibustion practice in East Asia appears to include a wider variety of tools and applications than is currently being performed in Australia.

Pharmaceutical Symposium

(Sponsored by Kobayashi Pharmaceutical Co. Ltd.)

Chair: Toshiaki Makino (Nagoya City Univ., Japan)
and Ching-Chiung Wang (Taipei Medical Univ., Taiwan)

13:05 – 15:00 on April 16 (Sat.)

Room A1

- S2-1 Anti-allergic effect of Shoseiryuto (小青竜湯) and Byakkoka keishito (白虎加桂枝湯) and the roles of each components – the roles of peony root (芍藥) and gypsum (石膏) in these formulas**
Toshiaki Makino (Nagoya City Univ., Japan)
- S2-2 The prescription philosophy of Dun Huon Jin Shengn Tang (獨活寄生湯) for the prevention of arthritis**
Ching-Chiung Wang (Taipei Medical Univ., Taiwan)
- S2-3 Comparison of the improvement effects of nonalcoholic fatty liver disease of Gangjihwan (輕身丸) extracts by solvents in a high fat diet-fed obese C57BL/6 mouse model**
Soon Shik Shin (Dong. eui University, Republic of Korea)
- S2-4 Chinmedomics strategy for research of effective substance basis and synergistic properties of Yinchenhao-TangTang (茵陳蒿湯)**
Xijun Wang (Heilongjian TCM Univ., China)

Aim of Pharmaceutical Symposium:

How do we modernize traditional formula of Oriental medicines, and the role of each crude drug in the formula containing multiple crude drugs.

Toshiaki Makino¹ and Ching-Chiung Wang²

¹*Department of Pharmacognosy, Graduate School of Pharmaceutical Sciences, Nagoya City University, Japan*

²*Graduate Institute of Pharmacognosy and School of Pharmacy, College of Pharmacy, Taipei Medical University, Taipei, Taiwan*

In traditional Chinese, Korean, and Japanese Kampo medicine, the physicians do not usually prescribe single crude drug, but combine multiple crude drugs to make the formulas. From ancient times, many formulas containing crude drugs have been developed and descended until now. The crude drug components in the formula were sometimes fixed, and the physicians use the formula to treat specific diseases without considering the effectiveness of each crude drug. This tendency is popular in Japanese traditional Kampo medicine because Kampo theory has a little knowledge of the pharmacology of each crude drugs. Since physicians do not use each single crude drug but prescribe a fixed formula to the patients, the theory of pharmacology of each crude drug has not been developed in Japan. On the other hand, traditional Chinese medicine has the theory of pharmacology in each crude drug as the traditional knowledge, but it is not scientific. Everyone in the present does not know why the ancient physicians had established the crude drug components in the formula.

In this symposium, we would like to discuss how do we evaluate and know the role of each crude drug in the formula using modern science, and consider why the ancient physicians establish the formula. By this knowledge, we may make other new formula of traditional medicines.

S2-1

Anti-allergic effect of Shoseiryuto (小青竜湯) and Byakkokakeishito (白虎加桂枝湯) and the roles of each components – the roles of peony root (芍薬) and gypsum (石膏) in these formulas

Toshiaki Makino

Department of Pharmacognosy, Graduate School of Pharmaceutical Sciences, Nagoya City University, Japan

Background. Shoseiryuto (小青竜湯, Xiaoqinglongtang in Chinese) and Byakkokankeishito (白虎加桂枝湯) is a formula of traditional Chinese and Japanese traditional kampo medicine used to treat perennial nasal allergy and atopic dermatitis, respectively. Shoseiryuto contains eight crude drugs, Ephedra herb, Cinnamon bark, Peony root, Processed ginger, Asiasarum root, Glycyrrhiza, Schisandra fruit, and Pinellia tuber, and is registered in the 16th Edition of Japanese Pharmacopoeia, 2011. Byakkokankeishito contains five crude drugs, Gypsum, Anemarrhena Rhizome, Cinnamon Bark, Oriza Seed, and Glycyrrhiza.

Objectives. I evaluated the anti-allergic effect of Shoseiryuto and Byakkokankeishito, and the contribution of the crude drugs prescribed in the formulas using passive cutaneous anaphylaxis (PCA) reaction in mice.

Methods. The mixtures of eight or four crude drugs were decocted in water and lyophilized to prepare shoseiryuto and byakkokaishito extracts (SSRT and BKT), respectively. To evaluate the active ingredients, compositions of crude drugs were modified and decocted. The PCA reaction was induced by intravenous injection of ovalbumin (OVA) and Evans blue 48 h after intracutaneous injection of anti-OVA serum in mice ears. The crude drug extract was orally administered to overnight-fasted mice 2 h before induction of the PCA reaction. Ears were removed 30 min after induction, and the amount of Evans blue present was measured.

Results. Oral administration of SSRT suppressed the PCA reaction in a dose-dependent manner. Among the eight crude drugs comprising shoseiryuto, Asiasarum root (細辛), Pinellia tuber (半夏), and Glycyrrhiza (甘草) contributed positively, and Peony root (芍薬) contributed negatively to the anti-allergic effects of shoseiryuto. We isolated mudanpioside E from the extract of Peony root as the counteracting ingredient to exhibit the anti-allergic effects of Peony root-depleted SSRT.

BKT significantly suppressed the PCA reaction in a dose-dependent manner, and the effect of BKT was augmented by escalating the Gypsum (石膏) dosage. Among the five crude drugs comprising byakkokakeishito, Anemarrhena Rhizome (知母) contributed to the effect of byakkokakeishito, and the effect of Anemarrhena Rhizome was augmented by the addition of Gypsum, that is not active alone.

Discussion. When we used shoseiryuto for the treatment of allergic diseases, removal of Peony root from the traditional formula could augment its effect. When the composition of the formula is fixed by the regulatory policy, we can select Peony root with less containing mudanpioside E. Since this compound is not registered as the marker compound in Pharmacopoeia, the content of mudanpioside E in commercial Peony root were largely varied. Gypsum is mineral drug, and the active ingredients and experimental pharmacology are still unknown. Among the components of byakkokakeishito, Gypsum and Anemarrhena Rhizome belong to the group of the drugs to remove heat (清熱藥), and their synergistic effect of both drugs is appeared. Since Gypsum alone was not active, Gypsum may augment the anti-allergic activity of byakkokakeishito presumably through increasing intestinal absorption of Anemarrhena Rhizome-derived active constituents.

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S2-2

The prescription philosophy of Du-Huo-Ji-Sheng-Tang (獨活寄生湯) for the prevention of arthritis

Po-Wei Tsai¹, Chao-Hsin Chen², Sung-Hui Tseng³, and Ching-Chiung Wang^{*1,2,4}

¹*School of Pharmacy, College of Pharmacy;* ²*Professional Master Program in Pharmaceutical and Biotechnology Management, College of Pharmacy;* ³*School of Medicine, College of Medicine;* ⁴*Graduate Institute of Pharmacognosy, College of Pharmacy, Taipei Medical University, Taipei, Taiwan.*

Background. The Du-Huo-Ji-Sheng-Tang (DHJST) is widely used in clinical formula for treating osteoarthritis. The underlying formulating principles of DHJST is based on to the medical philosophy of Traditional Chinese Medicine (TCM) such as Si-Wu-Tang (SWT), wind-dampness herbs (WDH) and tonifying herbs (TH). However, there is no scientific evidence to support underlying formulating principles of TCM. In this study, we explored the preventive ankle inflammatory effects of DHJST, and determine which is the sovereign medicine (major drive herb) using primary culture rat chondrocytes (PRCs) and mono-iodoacetate (MIA)-induced osteoarthritis in rat model.

Methods. 1. Sample preparation: DHJST was divided into three groups according to the medical philosophy of traditional Chinese medicine (TCM), such as Si-Wu-Tang (SWT), wind-dampness herbs (WDH) and tonifying herbs (TH). The compositions of the four groups are as the Table 1. DHJST, SWT, WDH, TH each group was extracted by 50% ethanol refluxing methods, respectively. 2. In vitro assay: the anti-inflammatory effects of extracts were evaluated in lipopolysaccharide (LPS) and IL-1 β induced RAW 264.7 cells and primary culture of rat chondrocytes (PRCs) for investigating the inflammatory cytokines. 3. *In vivo* assay: the preventive ankle inflammatory by MIA-induced osteoarthritis in rat model. 4. Phytochemical analysis: the fingerprints of samples were analyzed by HPLC.

Results. The NO inhibition effects of DHJST and the combination group of three kinds extracts (SWT+WDH+TH) had no difference. Each group combined with TH showed stronger NO inhibition than without TH. We suggested that TH group is a major component of DHJST for NO inhibition. In the compositions of TH, *Cinnamomum cassia* bark (CC) and *Eucommia ulmoides* bark (EU) showed higher NO inhibition on LPS induced RAW 264.7 cells than the others. The HPLC fingerprint of TH was compared with each composition; the major peaks were from CC. 2-Methylcinnamic acid (1), cinnamic acid (2) and cinnamic aldehyde (3) were identified from CC by the HPLC analysis. Moreover, cinnamic aldehyde had strongest NO inhibition effect among the tested samples. Therefore, we suggested the NO inhibition effect of DHJST were major caused by *Cinnamomum cassia* bark (CC) and cinnamic aldehyde, suitable as the quality control marker. However, the prevention effects of DHJST were more than TH in MIA-induced rat osteoarthritis model.

Using Western blotting assay, TH strongly inhibited iNOS and MMP-13 expression than DHJST, however TH, CC and *Eucommia ulmoides* bark (EU) could induce COX- 2 expression, but DHJST couldn't. Moreover, TH and CC induced cytotoxicity at more 200 $\mu\text{g/mL}$ concentrations in LPS stimulated RAW 264.7 cells. The cytotoxic effects of TH, CC and EU would be reduced by NS-398. We suggested TH could induce COX-2 expression that influent the prevention effects of arthritis in MIA-induced rat model.

Conclusions. According to the above data, DHJST could reduce MIA-induced arthritis of rat. The anti-inflammation mechanisms of DHJST were through inhibition iNOS, COX-2 and MMP-13 expression. Moreover, the major herb was CC and cinnamic aldehyde is suitable as the quality control marker.

Table 1. The compositions of Du-Huo-Ji-Sheng-Tang and separated to the four groups.

Groups		Compositions
Du-Huo-Ji-Sheng-Tang (DHJST)	Si-Wu-Tang (SWT)	<i>Angelica sinensis</i> root, <i>Ligusticum chuanxiong</i> rhizome, <i>Paeonia lactiflora</i> root, <i>Rehmannia glutinosa</i> root
	Wind-dampness herbs (WDH)	<i>Angelica pubescens</i> root, <i>Loranthus parasiticus</i> stem, <i>Asarum heteropoides</i> root, <i>Gentiana macrophylla</i> root, <i>Siler divaricatum</i> root, <i>Poria cocos</i> sclerotium, <i>Achyranthes bidentata</i> root
	Tonifying herbs (TH)	<i>Eucommia ulmoides</i> bark (EU), <i>Panaxg ginseng</i> root (PG), <i>Glycyrrhiza uralensis</i> root (GU), <i>Cinnamomum cassia</i> bark (CC)

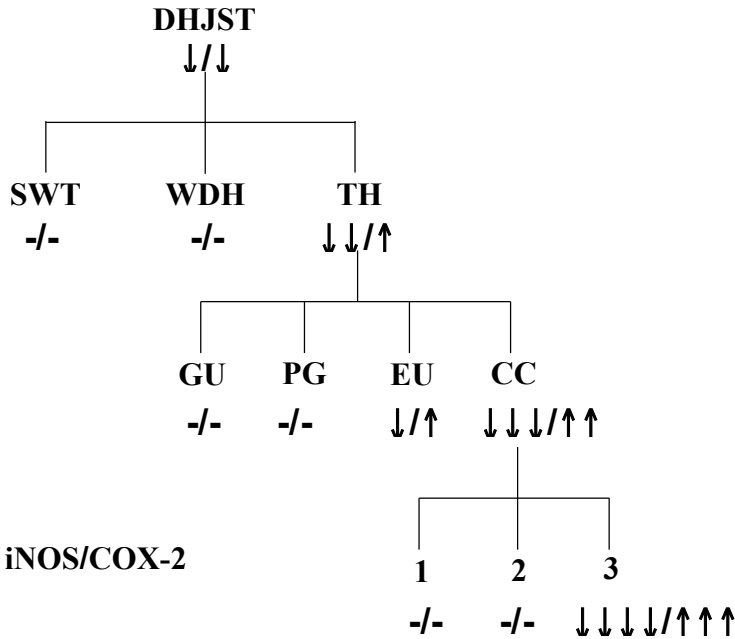


Figure 1. The effects of tested samples on iNOS and COX-2 expression from LPS induced RAW 264.7 cells.
 -: no effect; ↓: inhibition effect; ↑: enhance effects

S2-3

Comparison of the Improvement Effects of Nonalcoholic Fatty Liver Disease of Gangjihwan Extracts by Solvents in a High Fat Diet-Fed Obese C57BL/6 Mouse Model

Jong Seong Roh¹, Hye Rim Lee¹, Michung Yoon², and Soon Shik Shin¹

¹*Department of Formula Sciences, College of Korean Medicine and Research Center of Korean Medicine for Diabetes and Obesity, Dong-Eui University, 52-57, Yangjeong-ro, Busanjin-gu, Busan 47227, Republic of Korea*

²*Department of Biomedical Engineering, Mokwon University, 88, Doanbuk-ro, Seogu, Daejeon 35349, Republic of Korea*

Background. The herbal composition Gangjihwan (DF) extracted from stem of *Ephedra intermedia* Schrenk et C.A. Meyer (Ephedraceae), root and rhizome of *Rheum palmatum* L. (Polygonaceae), and root of *Lithospermum erythrorhizon* Siebold et Zuccarini (Boraginaceae) is traditionally used as an anti-obesity drug by local clinics in Korea.

Objectives. This study was undertaken to investigate the improvement effects of Gangjihwan (DF) extracts on nonalcoholic fatty liver disease in a high fat diet-induced obese mouse model.

Methods. DF was prepared by solvent-fractionations from herbal compositions including *Ephedra intermedia* Schrenk et C.A.Meyer, *Rheum palmatum* L and *Lithospermum erythrorhizon* Siebold et Zuccarini. Eight-week-old C57BL/6N mice were divided into five groups: Eight-week-old C57BL/6N mice were divided into 5 groups: a normal group given a standard diet, a control group given a high fat diet, and DF-FW, DF-GA30 and DF-GA70 groups given a high fat diet with DF-FW (filtered water extract, 250mg/kg), DF-GA30 (30% grain alcohol extract, 250mg/kg), and DF-GA70 (70% grain alcohol extract, 250mg/kg). After 8 weeks of treatment, body weight gain, feeding efficiency ratio, blood lipid and glucose markers, AST, ALT concentrations, liver weight and histology, adipose tissue mass, adipocyte size and number and the mRNA expression of target genes were examined.

Results. Body weight gain was significantly decreased in DF-FW and DF-GA70 compared with control. DF-FW, DF-GA30 and DF-GA70 decreased feeding efficiency ratio compared with control. Among them, the effect was magnified in DF-GA70. Circulating concentrations of ALT, glucose and leptin were decreased in DF-FW, DF-GA30 and DF-GA70 compared with control. The concentrations of total cholesterol and LDL-cholesterol were decreased in DF-GA30 and DF-GA70 compared with control. The concentrations of triglyceride, FFA and insulin were decreased in DF-GA70 compared with control. Liver weights were significantly decreased in DF-FW and DF-GA70 compared with control. Hepatic lipid accumulation was significantly decreased in DF-FW, DF-GA30 and DF-GA70 compared with control. Consistent with their effects on inhibition of hepatic lipid accumulation, liver fibrosis was decreased in DF-FW, DF-GA30 and DF-GA70 compared with control. Consistent with the effects on body weight gain,

DF-FW decreased the weights of mesenteric and brown adipose tissue. DF-GA30 decreased the weights of epididymal, retroperitoneal, inguinal and brown adipose tissue. DF-GA70 decreased the weights of mesenteric, epididymal, retroperitoneal, inguinal and brown adipose tissue. The size of adipocytes was significantly decreased by DF, whereas the adipocyte number per unit area was significantly increased. *In vivo*, DF-FW increased mRNA level of Bcl-2, and decreased mRNA level of C/EBP α . DF-GA30 increased mRNA levels of CPT-1 and VLCAD, and decreased mRNA levels of SREBP1c, α -SMA and caspase 3. DF-GA70 decreased mRNA levels of ACOX, thiolase, CPT-1 and VLCAD, and decreased mRNA levels of FAS, SCD1, SREBP1c, VCAM-1, α -SMA, caspase 3 and Bcl-2. *In vitro*, DF-GA70 had dose-dependent anti-lipogenesis effect in 3T3-L1 cells. mRNA levels of PPAR γ , C/EBP α , SREBP1c, LPL, FAS and FABP4 decreased in proportion with dose of DF-GA70 and protein levels of PPAR γ , C/EBP α , FABP4 and SREBP1c suppressed in proportion with dose of DF-GA70. Among them, the effect was magnified in 10 μ g/M ℓ . DF-GA70 did not reduce cell viabilities in 3T3-L1 cells at doses below 20 μ g/M ℓ . DF-GA70 10 μ g/M ℓ suppressed lipogenesis in 3T3-L1 cells. mRNA levels of PPAR γ , C/EBP α , SREBP1c, LPL, FAS and FABP4 decreased and protein levels of PPAR γ , C/EBP α , FABP4 and SREBP1c suppressed in 10 μ g/M ℓ . The effect was magnified at 4th day of differentiation. DF-GA70 10 μ g/M ℓ did not reduce cell viabilities in 3T3-L1 cells at 2nd, 4th, and 7th day of differentiation.

Discussion and Conclusions. In conclusion, these results suggest that DF decreases body weight gain, feeding efficiency ratio, improves blood lipid and glucose metabolism, and reduces adipose tissue's mass and adipocyte size. And liver weight and hepatic lipid accumulation and liver fibrosis, contributing to the improvement of nonalcoholic fatty liver disease. In addition, these effects were more effective in DF-GA70 (70% grain alcohol extract) 10 μ g/M ℓ .

S2-4

Chinmedomics strategy for research of effective substance basis and synergistic properties of Yinchenhao-Tang (茵陳蒿湯)

Aihua Zhang, Xijun Wang

National TCM Key Laboratory of Serum Pharmacochimistry, Key Laboratory of Metabolomics and Chinmedomics, Heilongjiang University of Chinese Medicine, Heping Road 24, Harbin 150040, China

Yinchenhao Tang (YCHT), a well known Chinese herbal formula, was recorded in “Shanghanlun” that is a classic resource on traditional Chinese medicine (TCM) written by Zhongjing Zhang (150-215 A.D.). It consists of the capitulum *Artemisia annua* L. (the monarch herb), the fruit of *Gardenia jasminoides* Ellis (the minister herb), and the rhizome of *Rheum Palmatum* L. (the assistant and servant herb) and has been used for more than thousands years to treat jaundice syndrome and liver disorders. For the screening and analysis of effective substance basis in TCM, conventional phytochemical approaches which isolate and identify individual components one by one could be used to search the lead compounds in herbal medicine, but this strategy is a time-consuming, and labor intensive. It is essential to develop novel and available methods which could overcome all these limitations, to reveal the complex compounds in formulae.

To solve these problems, we have established chinmedomics strategy by integrated Serum Pharmacochimistry of TCM with Metabolomics technology, that is a unique method of TCM research, made outstanding contributions in solving the effectiveness and security aspects of TCM. In our study, the establishment and implementation of chinmedomics was to explore the intrinsic link between the essence of syndrome and formulae efficacy as well as potentially active constituents from TCM. YCHT has hepatoprotective effect through regulating the perturbed metabolic pathways to the normal state. Under the premise of therapeutic efficacy, a total of 21 peaks were tentatively characterized in vivo, and a correlation model between the marker metabolites and their chemical composition was used to screen the potential active constituents. It showed that top three compositions (6,7-dimethylesculetin (D), geniposide (G) and rhein (R)) as the effective substance basis had an extremely relationship with therapeutic effect, might play important roles in the therapeutic effect of YCHT. Activity of these compounds has also been verified by the cell biological assay.

Continuing work was to elucidate synergistic properties of marker compound D, G, and R. DGR combination could significantly increase the plasma level, slow elimination rate than any one or two of the three individual compounds, which may be an indication of a synergism. Mapping merged major signaling networks, DGR combination exert a more robust synergistic effect than any one or two of the three individual compounds by hitting multiple targets. They can regulate molecular networks through activating both intrinsic and extrinsic pathways to intensify therapeutic effects. DGR targets not only immunity and metabolism but also targets key regulatory pathways, thereby helping to restore the normal function. It

suggests that the chinmedomics strategy is a powerful approach used for exploring the effective substance and therapeutic mechanisms of herbal formulae, and may speed your drug discovery from traditional medicine.

Medical Symposium

(Sponsored by Kracie Pharmaceutical Co. Ltd.)

Chair: Silke Cameron (Germany)
and Shin Takayama (Tohoku Univ., Japan)

14:05 – 16:00 on April 17 (Sun.)
Room A1

**S3-1 Preclinical and gene expression study of new herbal preparation
targeting triple-negative breast cancer**

Seong-Gyu Ko (Korea)

S3-2 The potential role of *Solanum nigrum* in treating various cancers

Chen-Jei Tai (Taipei Medical Univ., Taiwan)

**S3-3 Identification of distinct symptom sets predictive of positive
outcome for treatment of headache with two Kampo formulae by
using TOMRASS, a patient-based questionnaire database**

Yoko Kimura (Tokyo Women's Medical Univ., Japan)

S3-1

Preclinical and gene expression study of new herbal preparation targeting triple-negative breast cancer

Seong-Gyu Ko

Korea

Triple-negative breast cancer (TNBC) constituting 10–20% in breast cancer is highly metastasizing and recurrent with poorer prognoses. Although TNBC is sensitive to chemotherapies, TNBC metastases frequently occur and shorten 5-year survival rates of patients. Furthermore, target therapies for TNBC remain yet to be clearly elucidated in clinical trials. Recent studies in cancer therapeutics revisit a traditional herbal medicine, since herbal extracts or mixtures based on the traditional medicines have shown anticancer effects with no or less side effects compared to other anticancer therapeutics including chemical compounds and targeting antibodies.

Inflammation is a risk factor in cancer disease, which is tightly linked to cancer progression including tumorigenesis and metastasis. Cancer inflammation is activated by several inflammatory cytokines such as TNF- α , IL-1, IL-6, IL-8, and IL-18. Particularly, IL-6 as a poor prognostic factor in breast cancer patients progresses cancer metastasis. In addition, IL-6-induced dimerization of IL-6 receptor activates STAT3, which contributes to cancer progression in cancer inflammatory environment. Recent studies have shown that STAT3 activation leads to TNBC progression, suggesting that STAT3 is likely to be a therapeutic target for TNBC.

On the basis of the traditional medicine, SH003 was extracted from the herbal mixtures. SH003 showed anticancer effects on different breast cancer cells without affecting normal epithelial cell viability, both in vitro and in vivo. Moreover, SH003 suppresses MDA-MB-231 growth and metastasis by inhibiting STAT3-IL-6 pathway, thereby suggesting that SH003 may be useful for treating TNBC.

S3-2

The potential roles of *Solanum nigrum* in treating various cancers

Chen-Jei Tai, M.D., Ph.D.

Professor, College of Medicine, Taipei Medical University

Chemotherapy is the main approach for treating various cancers, but the clinical performance of chemotherapy is limited by uncertain response rate, drug resistance, and adverse effects that severely affect the quality of life of patients. Our recent studies have shown that the aqueous extract of *Solanum nigrum* (AE-SN) is a crucial ingredient in some traditional Chinese medicine (TCM) formulas for treating cancer patients and exhibits integrative antitumor effects, such as in hepatocellular carcinoma with cisplatin or doxorubicin treatment, in human ovarian carcinoma cells with cisplatin, doxorubicin, or docetaxel treatment, in human colorectal carcinoma cells with cisplatin, doxorubicin, docetaxel or 5-fluorouracil treatment, and in human endometrial carcinoma cells with docetaxel treatment. We found that AE-SN treatment was significantly effective in suppressing proliferation and cell viability of cancer cells through regulation of autophagic pathway and/or apoptotic pathway, thereby enhancing the cytotoxic effects of chemotherapy. In conclusion, our results provide meaningful evidences for integrative cancer therapy by *Solanum nigrum* (AE-SN) with various chemotherapeutic agents in the future.

Keywords: Chemotherapy, *Solanum nigrum*, traditional Chinese medicine, autophagic pathway, apoptotic pathway

S3-3

Identification of distinct symptom sets predictive of positive outcome for treatment of headache with two Kampo formulae by using TOMRASS, a patient-based questionnaire database

Yoko Kimura, Takashi Ito,

Institute of Oriental Medicine, Tokyo Women's Medical University

Kampo medicine, based on traditional Chinese herbal medicine, has been the backbone of Japanese medicine for four hundred years, and has its own system of disease cognition and its own healing philosophy, which have their roots in the Japanese way of thinking. Though Kampo is currently not the mainstream of medical treatment in Japan, which is instead based on Western medicine, ordinary Japanese people still give it a degree of credence, and Kampo formulae are covered by the National Health Insurance System (NHIS) in Japan. Therefore, it is important to examine the effect of Kampo medicine on disease entities understood in the framework of modern Western medicine.

However, placebo-controlled trials do not reflect the usual use of Kampo in actual practice. In Kampo medicine, we select a prescription by taking into consideration not only the chief complaint or diagnosis, but also other symptoms accompanying the chief complaint. Therefore, it is important to identify key symptoms or symptom sets that would predict a positive outcome of treatment. In order to evaluate the efficacy of kampo formulae, we have developed a computerized Kampo database designated as Tokyo Women's Medical University Oriental Medicine Research Active Support System (TOMRASS), which accumulates patient-based evaluations covering a wide range of complaints, symptoms, constitutions and conditions [1].

I would like to illustrate the practical use of TOMRASS by discussing treatment of headache, which is one of the major complaints in chronic diseases. We aimed to evaluate and compare the efficacy of two commonly used Kampo agents, yokukansan-based prescription (抑肝散加味方) and chotosan (釣藤散), which include *Uncaria hook*, for patients with headache by using TOMRASS to identify symptom sets that would be specific indicators for treatment with each agent.

Yokukansan-based prescription (抑肝散加味方) was given to 45 patients (M/F 6/39, mean age 38 years with a range of 25-68 years, 34 with migraine, 6 with tension-type headache, 5 with mixed-type headache), while chotosan (釣藤散) was given to 46 patients (M/F 13/33, mean age 48 years with a range of 19-77 years, 31 with migraine, 14 with tension-type headache, 1 with mixed-type headache). Among various combinations of factors, painful sensation in the eyes, irritability, and stiffness in the back were the best subset for predicting successful treatment of headache with Yokukansan-based prescriptions (抑肝散加味方) [2]. In the case of chotosan (釣藤散), morning headache, vasodilatation of sublingual veins, and stiff shoulder were the best subset of predictive variables for successful outcome [3].

We used the results from these patients to develop a logit model to predict the outcome for individual

patients with headache treated with yokukansan-based prescription (抑肝散加味方) and chotosan (釣藤散). To validate the model, another 157 patients (M/F 13/144, mean age 44 years with a range of 20-84 years) were selected; 79 were given yokukansan-based prescription (抑肝散加味方), while 78 received chotosan (釣藤散). Predictive accuracy of the developed model was 82% for yokukansan-based prescription (抑肝散加味方), and 72% for chotosan (釣藤散).

Thus, we have identified two distinct symptom sets that would predict a positive outcome of treatment with the two Kampo formulae, by employing our computerized database of patient-based self-evaluation questionnaires, TOMRASS. We believe this approach, focusing on symptoms, would allow Western physicians and scientists to understand Kampo treatment more easily, and may provide a new paradigm that will allow Kampo medicine to be integrated into Western medicine.

[1] Kimura Y et al. Kampo Med 2004; 55(3): 337-342 .

[2] Kimura Y et al. Kampo Med 2008; 59(2): 265-271.

[3] Kimura Y et al. Kampo Med 2008; 59(5): 707-713.

General Lectures

GL-1 The value of collections in clarifying historical changes in Chinese herbal medicine

Eric Brand (Hong Kong Baptist University, HongKong)

Chair: Masayoshi Oyama (Gifu Pharmaceutical Univ., Japan)

15:05 – 16:00 on April 16 (Sat.), Room B1

GL-2 Japanese Kampo medicine after the great east Japan earthquake in Miyagi and Fukushima prefectures

The role of Kampo medicine after the great east Japan earthquake disaster

Shin Takayama (Tohoku Univ.)

A randomized controlled trial using kampo medicine, Saikokeishikankyoto (柴胡桂枝乾姜湯) on posttraumatic stress disorder developed after the great east Japan earthquake and tsunami

Takehiro Numata (Tohoku Univ.)

Chair: Silke Cameron (Germany)

16:00 – 16:55 on April 16 (Sat.), Room B1

GL-3 Present status and perspective of integrative medicine in Japan

Toshinori Ito (Osaka University)

Chair: Dr. Takao Namiki (Chiba Univ., Japan)

16:55 – 17:00 on April 16 (Sat.), Room B1

GL-1

The role of collections in clarifying historical changes in Chinese herbal medicines:

Confusion of botanical identity due to shared common names

Eric Brand

School of Chinese Medicine, Hong Kong Baptist University, Hong Kong

Different substances that share the same common name have been a potential source of confusion throughout the history of Chinese herbal medicine. The botanical origin of many herbs has varied based on different regions and historical periods, and confusion due the use of the same common name for different substances remains an important concern for clinicians today.

The phenomenon of confusion in botanical identity due to the overlapping use of common names has been previously demonstrated with both textual research and market investigation. Contemporary field research in regions such as Hong Kong, mainland China, and Taiwan has shown that many examples of adulteration and marketplace confusion result from the use of shared common names, and similar trends are documented historically in the Chinese materia medica literature. However, previous research on historical changes in the botanical identity of Chinese herbs has largely focused on literature review, and relatively few pre-modern collections have been systematically investigated to validate the conclusions of this research with physical samples.

In addition to cases of confusion or misidentification resulting from shared common names, many examples can be found of closely related plants from the same genus that share a given Chinese drug name. By analyzing historical collections and current market specimens, the clinical prevalence of different species can be assessed using an evidence-based approach that complements the conclusions derived from materia medica literature alone. Thus, historical collections have the potential to not only clarify cases of confusion or misidentification, but can also help to clarify the prevalence of different species in cases where a given drug can be derived from more than one species.

Featuring 1,268 Chinese materia medica samples that were collected between the early 1800s and 1929, the Economic Botany Collection at Kew Royal Botanic Gardens in the UK offers a unique vantage point for clarifying the identity and historical prevalence of Chinese medicinal materials that share common names. In this research project, commonly confused herbal medicines that can be effectively distinguished based on macroscopic features were selected from the Kew archives, with priority given to examples that illustrate prominent historical changes, safety issues, and misidentification concerns in the modern marketplace. A preliminary report on our current research in this area will be presented, and recommendations for future research will be proposed.

GL-2

The role of Kampo medicine after the great east Japan earthquake disaster

Shin Takayama, Natsumi Saito, Takehiro Numata, Akiko Kikuchi, Soichiro Kaneko, Tetsuharu Kamiya, and Tadashi Ishii

Department of Education and Support for Regional Medicine, Department of Kampo Medicine, Tohoku University Hospital, 1-1, Seiryomachi, Aoba ward, Sendai 980-8574, Japan

Background. The coastal areas of eastern Japan were devastated by the massive earthquake and tsunami that occurred on March 11, 2011. Tsunami waves reached a maximum height of approximately 16 m at the Miyagi fishery port of Onagawa, sweeping away people, cars, houses, and even whole communities. More than 400,000 people were forced to evacuate to evacuation centers. After the Great East Japan Earthquake and huge tsunami, traditional Japanese (Kampo) medicine was successfully used in the disaster-stricken areas in Miyagi Prefecture.

Objectives. In this report, we describe the disaster medical relief operation and medical conditions that emerged after the natural disaster that struck Miyagi Prefecture, as well as some case reports that were successfully treated using Kampo medicine.

Methods. Based on the medical records and documents on the 12-day medical relief operations conducted at the evacuation centers in the Onagawa and Ishinomaki areas during the first 73 days after the disaster, we retrospectively investigated the data on symptoms and Kampo treatment ($n = 236$). Three periods were assessed: the acute period, starting from the day of the disaster up to the 14th day after the disaster; the sub-acute period, which includes the 15th to the 42nd day after the disaster; and the chronic period, which covers the 43rd to the 73rd day after the disaster. Data on symptoms and treatment were collected for each period.

Results. We treated 72 patients during the acute period, 117 during the sub-acute period, and 47 during the chronic period. During the acute period, many patients presented with the common cold, hypothermia, and enterocolitis. For patients with recent onset of symptoms of the common cold, Kampo preparations such as kakkonto and keishito were used, whereas ninjinto and tokishigyakukagoshuyushokyoto were used for the treatment of hypothermia. Goreisan was prescribed for the treatment of enterocolitis accompanied by diarrhea or vomiting which were not relieved by anti-diarrheal agents or intestinal regulators. During the sub-acute period, allergic symptoms such as persistent cough, pharyngeal pain, runny nose, and itchy eyes were common. We prescribed Kampo preparations with anti-allergy properties such as shoseiryuto for these patients. During the chronic period, an increase in psychiatric symptoms such as irritability, anxiety, lightheadedness, and insomnia were observed, as well as somatoform disorders. For these symptoms, we prescribed Kampo preparations with tranquilizing properties, such as yokukansan and kamikihito. Moreover, many patients complained of constipation, mashiningan or junchoto were prescribed.

Discussion. In this disaster medical relief operation, we observed that Kampo treatment relieved the symptoms of the patients. Kampo treatment is generally applicable after taking the history of the patient's illness and conducting a physical examination; it was a useful tool for this particular natural disaster, when commonly used medical supplies were insufficient. Oral Kampo preparations administered to treat cold sensitivity and to ultimately increase the feeling of warmth in the body, which are based on the unique concepts of Kampo medicine, were effective to treat patients of hypothermia. Moreover, Kampo preparations for severe cold symptoms, anti-allergic agents that do not cause drowsiness, and antitussive agents for persistent cough were effective treatments that complement Western medicine. There were also occasions in which Kampo preparations were also used to treat symptoms during the chronic period, such as psychiatric disorders and constipation. Kampo therapy imparted beneficial effects on both physical and mental/emotional symptoms in patients.

Conclusions. Kampo medicine is a useful treatment that may complement Western medicine during extensive natural disasters.

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- [3] Takayama S, Okitsu R, Iwasaki K, et al.: Role of oriental medicine in the great East Japan earthquake. *German Journal of Acupuncture and Related Techniques* 2012; 55(2): 15-18 (in German).
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Personal profile.

Shin Takayama M.D., PhD. graduated from Miyazaki Medical College in 1997 and from Tohoku University Graduate School of Medicine in 2010. He is an associate professor at the Tohoku University Hospital. Fellow of the Japanese Society of Internal Medicine, the Japanese Circulation Society, the Japan Society of Oriental Medicine, the Japanese Society of Balneology, Climatology, and Physical Medicine, and the Japan Primary Care Association.

Awards.

- [1] 63th Congress of Japan Society for Oriental Medicine, President Prize in 2012
- [2] Tohoku University Hospital Prize in 2014
- [3] 66th Congress of Japan Society for Oriental Medicine, Prize for encouragement in 2015

GL-3

A randomized controlled trial using Kampo medicine saikokeishikankyoto (柴胡桂枝乾姜湯) on posttraumatic stress disorder developed after the great east Japan earthquake and tsunami

Takehiro Numata¹, Shin Takayama¹, Koh Iwasaki², Akiko Kikuchi¹, Yuka Ikeno¹, Hitoshi Nishikawa¹, Soichiro Kaneko¹, Tetsuharu Kamiya¹, Natsumi Saito¹, and Tadashi Ishii¹

¹*Department of Kampo Medicine, Tohoku University Hospital, Sendai, Japan*

²*Department of Kampo Medicine, Southern TOHOKU Research Institute for Neuroscience, Iwanuma, Japan*

Background. The Great East Japan earthquake and tsunami (GEJET) caused huge damage over a wide area of eastern Japan. A part of survivors suffered from posttraumatic stress disorder (PTSD).

Objectives. This randomized, observer-blinded, controlled trial examined the efficacy and the safety of Kampo medicine Saikokeishikankyoto (SKK) in the treatment of PTSD.

Methods. Forty-three participants with an Impact of Event Scale-Revised (IES-R) score ≥ 25 were randomized into SKK treatment ($n = 21$) and control ($n = 22$) groups. Adult Survivors of GEJET who were diagnosed as PTSD were included. Patients suffering from psychosis in the past were excluded. Participants in SKK group took 2.5 g of SKK extract (TJ-11) 3 times a day for 2 weeks. Participants in control group did not take any medication for 2 weeks. All in both group re-answered IES-R at the last of 2-week medication/observation period. The mean of IES-R were calculated at the baseline and at the endpoint. Comparisons between the two groups at the baseline were conducted using independent samples t-test or chi-square test. Comparisons between two groups were performed by two-way analysis of variance. Comparisons between the baseline and the endpoint in each group were performed by the paired *t*-test when the inter-group difference was significant ($p < 0.05$).

Results. The background factors between the two groups showed no significant difference. The changes in total IES-R scores between the two groups showed a significant difference in the two-way analysis of variance ($p < 0.001$). Post-hoc analysis showed that the total IES-R score improved significantly in the SKK group, from 49.6 ± 11.9 to 25.5 ± 17.0 ($p < 0.001$). One participant in the SKK group withdrew from the study on the third day because of light coughing.

Discussion. Previous studies reported that monoamine level in mice changed and that plasma interleukin-6 level in human changed, after administration of SKK. We speculate that SKK can lead to those kinds of changes in PTSD patients.

Conclusions. This is the first study to investigate the efficacy of SKK in the treatment of PTSD. Two-week treatment with SKK significantly improved IES-R scores among PTSD patients. SKK might be a good treatment for psychological and physical symptoms in PTSD patients.

GL-4

Present status and perspective of integrative medicine in Japan

Toshinori Ito, M.D., Ph.D.

*Department of Integrative Medicine, Osaka University Graduate School of Medicine,
Osaka, JAPAN*

With the advances of diagnosis and treatment, modern medicine has made a remarkable progress. Japan has either the longest or second-largest average life span in the world, and in 2015, the percentage of the population over the age of 65 rose above 25%, bringing the society into the realm of ultra-population aging (super-aged society). As a consequence, the cost of healthcare is annually rising and rising in our country. Further, the majority of diseases are lifestyle-related disorders including cancer, hypertension, dyslipidemia and obesity. In the current health care system, there seems to be a limitation to overcome these chronic disorders which are the complex system intertwining physical, social, psychological, and environmental factors.

With Great East Japan Earthquake 2011 as a turning point, health care system is just about to change. This disaster caused changes on one's sense of values and view of life, resulting in awareness of significance of self care.

Integrative medicine which is recently attracting more attention is a holistic and patient-centered team approach in close cooperation with multidisciplinary health care professionals. There actually exist some disorders which are possibly unable to control by the current medical treatment. Examples include metabolic syndrome, locomotive syndrome, cognitive impairment, and physical impediment by large-scale disaster together with PTSD, in which integrative medicine are just needed. Thus, we are really expected to develop a Japanese-style integrative medicine based on evidences via clinical studies.

In this lecture, I would like to talk about the present status and perspective of integrative medicine in our country.

Education Lectures

EL-1 Development of acupuncture in Germany reflected by the Societas Medicinae Sinensis (SMS) and German Medical Acupuncture Association (DÄGfA)

Klaus Hambrecht (Clinic for Chinese Medicine, Germany)

Chair: Yoshiharu Motoo (Kanazawa Medical Univ., Japan)

10:15 – 10:45 on April 16 (Sat.), Room B1

EL-2 Kampo international: Activities of the International Society for Japanese Kampo Medicine (ISJKM) and Kampo teaching for doctors in Germany

Heidrun Reißenweber-Hewel (Technical Univ. of Munich, Germany)

Chair: Kenji Watanabe (Keio Univ., Japan)

10:50 – 11:20 on April 16 (Sat.), Room B1

EL-3 Phytotherapy in Europe

Kenny Kuchta (National Institute of Health Sciences, Japan)

Chair: Kenji Watanabe (Keio Univ., Japan)

16:55 – 17:00 on April 16 (Sat.), Room B1

EL-4 Insights from teaching Kampo medicine in Austria

Bernd Kostner (Zentrum für Ganzheitliche Medizi, Austria)

Chair: Keiko Ogawa (Kanazawa Univ., Japan)

13:05 – 13:45 on April 16 (Sat.), Room B1

EL-5 Current state and development of traditional Korean medicine

Joon-Seok Byun (Daegu Haany Univ., Korea)

Chair: Chan V.K. Abraham (Purapharm Int., HongKong)

10:50 – 11:20 on April 16 (Sat.), Room B1

EL-6 The role of the complementary medicine in cancer treatment – Including the Korean medicine

In-Tae Kim (Jangdeuk Korean Medical Hospital, Korea)

Chair: Chan V.K. Abraham (Purapharm Int., Hong Kong)

14:15 – 14:45 on April 16 (Sat.), Room B1

EL-7 Integrating traditional Chinese medicine healthcare into diabetes care by reducing the risk of developing breast cancer among type 2 diabetic patients: A population-based case control study

Jung-Nien Lai (Taipei City Hospital, Taiwan)

Chair: Zuimei Miyazaki (Miyazaki Clinic, Japan)

16:55 – 17:00 on April 16 (Sat.), Room B1

EL-8 Beneficial effect of *Vitis thunbergii* on osteoporosis

Wen-Fed Chiou (Ministry of Health and Welfare, Taiwan)

Chair: I-Hshin Lin (Tzu Chi Univ., Taiwan)

14:50 – 15:20 on April 17 (Sun.), Room B1

EL-9 Current state of ISO - terms and concepts and those power

Yasuyuki Hirose (Univ. of the Ryukyus)

Chair: Klaus Hambrecht (Clinic for Chinese Medicine, Germany)

15:25 – 15:55 on April 17 (Sun.), Room B1

EL-10 Current state of the ISO - process relating to Kampo-TCM-Oriental medicine

Hans Rausch (Germany)

Chair: Kenny Kuchta (National Institute of Health Sciences, Japan)

16:00 – 16:30 on April 17 (Sun.), Room B1

EL-1

Development of acupuncture in Germany reflected by the *Societas Medicinae Sinensis (SMS)* and German Medical Acupuncture Association (DÄGfA)

Klaus Hambrecht

*Clinic for Chinese Medicine, Schützenstr, 16 Hanau; SMS-Societas Medicinae Sinensis
Franz-Josefstr. 38 Munich, Germany*

In this presentation the speaker will give you a detailed picture of how acupuncture developed in Germany from the early beginnings up to the present time.

The focus will be on the medical acupuncture associations where the members are medical doctors - which means that the knowledge of western medicine is combined with the knowledge of traditional acupuncture systems.

The SMS – Societas Medicinae Sinensis – (International Chinese Medical Society) was founded 1978 by M. Porkert, the German Medical Acupuncture Association was founded by Bachmann and Schmidt in 1951.

Furthermore you will be informed about the structure of both associations, training programs ,scientific works and other associated projects.

Medical Acupuncture in Germany, use of Chinese Herbal Therapy and their regulations will be discussed including EU-regulations and public health aspects.

EL-2

Kampo international: Activities of the International Society for Japanese Kampo Medicine (ISJKM) and Kampo teaching for doctors in Germany

Heidrun Reißweber-Hewel

Private Clinic für Japanese Medicine, Graefelfing/Munich, and Competence Centre für Complementary Medicine, Technical University of Munich, Germany

Introduction. Japanese traditional herbal medicine (Kampo Medicine) with its unique diagnostic and therapeutic characteristics is continuously spreading in Western countries, especially in Germany. Germany has a long tradition of phytomedicine itself. Patients and doctors recognize that the world's many healing traditions provide additional therapeutic options and prefer an integration of traditional medicine and modern biomedicine.

Main Topic. Our attempt to further promote the integration of Kampo Medicine into modern medicine within an international context focuses on two pillars: first, activities of an international scientific society to raise the awareness for the special concepts of Japanese traditional medicine and second, high level clinical education of physicians in the field of Kampo Medicine.

In 2009 a handful doctors who all had studied Kampo in different institutions in Japan founded the International Society for Japanese Kampo Medicine (ISJKM). The purpose of this society is to promote the understanding of Kampo worldwide and to promote excellence in clinical practice, education and research. Clinicians, researchers or other professionals who identify with the specific Kampo approach and are interested in international communication are cordially invited to join the society. ISJKM organizes own international symposia and workshops in English language. After conferences in Munich and London, the 3rd International Symposium was held 2015 in Vienna, Austria and hosted 80 participants from eight countries around the world. It introduced major highlights of Kampo Medicine in all aspects: traditional knowledge, modern research and clinical practice (www.isjkm.com).

With respect to education, we launched a postgraduate education program in Germany to instruct medical doctors in the clinical practice of Kampo Medicine. This program is carried out under the umbrella of the German Medical Association of Acupuncture (DÄGfA). It can be completed independently or as part of a Master Education Plan. After a basic education in acupuncture, applicants can choose Kampo Medicine and Japanese style acupuncture in the advanced courses as modules to obtain the degree of a Master of East Asian Medicine.

Conclusions. During the past years, our activities managed to raise the international awareness for Kampo medicine to a considerable level which cannot be ignored any more. In order to further promote the understanding of Kampo worldwide, all efforts should be pooled to extend education and training of physicians and to strengthen the international scientific collaboration.

EL-3

Phytotherapy in Europe

Kenny Kuchta

National Institute of Health Sciences, Division of Pharmacognosy, Phytochemistry and Narcotics, Setagaya-ku, Tokyo, Japan

Although numerous forms of traditional medicines have been established by the cultures of the Americas, sub-Saharan Africa, Australia, and the Pacific Islands, the two lines of tradition in European Phytotherapy, especially in the tradition preserved in Catholic and Orthodox monasteries since the medieval period. This medicinal tradition can be traced back to diverse sources in the ancient eastern Mediterranean, ultimately originating from the medicinal knowledge established by the ancient civilisations of Sumer and Egypt in the late forth millennium BC. Already in these ancient days, Sumerian cuneiform tablets mention medicinal practitioners titled “asu” specialised in prescribing and manufacturing herbal remedies; notably as a distinct profession from both surgeons and spiritual healers. Although the archaeological record is still limited, e.g. a Sumerian cuneiform tablet from c. 3000 BCE details fifteen pharmaceutical prescriptions (i.e. mixtures of several individual plant drugs). Today, more than 250 names of medicinal plants from Sumerian and the later derived cuneiform scripts are known, although the identification of the corresponding botanical names and associated diseases has proven very difficult for these early sources. From a much later period, a medicinal and pharmaceutical compendium on 660 ceramic tablets was found in the ruins of the library of the palace of King Ashurbanipal (668-627 BC) in Nineveh, capital of the Neo-Assyrian Empire, which at the time also encompassed Israel. Israel at the Mediterranean coast constitutes an important waypoint in the history of medicine as from its harbours Phoenician and Greek traders could transfer the knowledge from the ancient near East to the southern shores of Europe, together with papyri of documenting the parallel developments of medicine in ancient Egypt. In contrast to the abovementioned cuneiform scripts, ancient Egyptian medicinal books have proven easier to interpret and papyri as a writing material were easier to handle than clay tablets, thus speeding up the transfer of knowledge across the sea. One notable example of an Egyptian medical textbook from ca. 1550 BC is the “Papyrus Ebers” – a 110-page scroll, which is about 20 meters long – that is currently kept at the library of the University of Leipzig, where I made my doctorate. This scroll contains numerous prescriptions as well as theoretical treatises on human physiology and may be seen as a typical example for those books that were both transported to Greece in the early 1st millennium BC, thus inspiring the development of the first schools of medicine in Europe (e.g. by Hippocrates of Kos, ca. 460-370 BC), and later stored in the famous library of Alexandria during the Hellenistic period. When the Roman Empire incorporated most of Europe including the entire Mediterranean basin into a single state, the medicinal knowledge accumulated by Greek scholars spread to the entire continent and the textbooks written in this age, e.g. by Pedanius Dioscorides (40-90 AD) and Claudius Galenus (129-216 AD), should remain the basis all medicinal education in Europe for the following one and a half millennium. After the downfall of the Western

Roman Empire and the ensuing chaos of the 5th and 6th centuries AD, this tradition was mainly continued in the Byzantine and Empires in the Eastern Mediterranean and their seminal medical and pharmaceutical scientists like Paulus Aegineta (625-690 AD) and Avicenna (980-1037 AD), from whose works large amounts of traditional knowledge were reimported to Western Europe during the High Medieval Period. There, the respective medicinal knowledge has been preserved and further elaborated in hospitals and libraries of monasteries all over Europe, now also including native plants of the north of the continent that were first added to this tradition by Hildegard of Bingen (1098-1179 AD). From this age on, an unbroken tradition of herbal medicine has continued in European monasteries to the present day, even if it has been eclipsed by modern scientific biomedicine in the most recent centuries. However, famous monks and medical experts like Sebastian Kneipp (1821-1897 AD) have helped continue this tradition even through these difficult times.

All my past and present work as well as my planed research project for the future aim to bridge the gap not only between traditional East Asian herbal medicine and European phytotherapy, but also between both of them and the modern scientific biomedicine in order to facilitate novel therapy approached based on traditional knowledge for the patients of the future.

EL-4

Insights from teaching Kampo medicine in Austria

Bernd Kostner¹, Karin Stockert²

¹*Zentrum für Ganzheitliche Medizin, Hochstrasse 4, 1230 Wien, Austria*

²*Österreichische Gesellschaft für Akupunktur, Riedelgasse 5, 1130 Wien, Austria*

Background. Austria is located in middle Europe and has a population of 8.6 million that speak German as the official language. The country is well known for its alpine scenery and its tradition of classical music. Vienna, the capital city used to be the residence of many outstanding researchers in the field of medicine like Karl Landsteiner, Theodor Billroth and Sigmund Freud, to name only a few. But Austria has had also a long tradition of oriental medicine compared to other European countries. The surgeon Johannes Bischko had been one of the pioneers of medical acupuncture in Europe. He founded the Austrian Society of Acupuncture which instructed thousands of medical doctors and contributed to research in their field. Not only Chinese, but also Japanese and Korean styles of acupuncture were taught. Later on, Chinese herbal medicine was taught to hundreds of doctors by experienced practitioners who had previously been trained in China.

The author of this study had been given the chance to study Kampo medicine beginning in 1994 from acknowledged experts in Japan. He started the first Kampo Curriculum for medical doctors in Austria in 2012 and was elected as chairman of the 3rd International Symposium for Japanese Kampo Medicine in 2015 in Vienna.

Objectives. The aim of our study was to determine a) how basic Kampo knowledge can be taught in a minimum of time b) what are the specific difficulties in learning the Kampo method c) how Kampo knowledge can be adopted in clinical practice and d) what are the advantages and disadvantages for physicians who were already trained in traditional Chinese medicine?

Methods. For our study we used both questionnaires and personal interviews. We compared three different groups: A) Doctors who had previously studied Chinese herbal medicine (TCM). B) Doctors who had no previous experience with TCM. C) Doctors who were familiar with medical acupuncture

Results and Discussion. Doctors who were experienced in acupuncture usually had good palpatory skills which enabled them to learn abdominal and pulse diagnosis faster. On the other hand, those who had been familiar with basic theory of traditional Chinese medicine easily learned the basic concepts of Kampo (for example: *ki*, *ketsu* and *sui*). Although they had to discard some part of TCM theory and learn the Kampo terminology, this group clearly had less difficulties than the others.

Conclusions. Medical doctors already know a lot about human physiology. Therefore it is easy for them to learn Kampo, which is based more on clinical observation than on abstract theory. Yet, the difficulties lie in a different approach to health and disease and a different terminology. Physicians with previous training in TCM and acupuncture clearly have an advantage in learning the Kampo method.

EL-5

Current state and development of traditional Korean medicine

Joon Suk Byun

Department of Internal Medicine, Daegu Haany University, Sang-dong, Daegu, Korea

Background. Traditional Korean Medicine (韓醫學, TKM) is the traditional medicine and medical practices that especially developed in Korea. In fact, Korean Medicine is popular in Korea and loved by people in Korea as a traditional medicine.

Objectives. Korean Medicine has developed its own unique way of diagnosis and treatment in Korea. 東醫寶鑑 is composed by Heo Jun, a court physician (Cho-Sun Dynasty in KOREA), and 東醫壽世保元 is by Lee Jae Ma, who made the concept of Sa-sang typology. 東醫寶鑑 is one of the greatest books in the history of Oriental Medicine and registered as a World Cultural Heritage by UNESCO.

Results. There are 11 numbers of undergraduate school of Korean Medicine (6 year courses) in Korea. During premedical school (2 years), the students learned basic science such as Chemistry and Biology, Languages including Medical English and Traditional Chinese, and Liberal arts. During medical school (4 years), they learned more deeply basic Korean Medicine for 2 years such as Herbal medicine, Herbal Formula, Physiology, Pathology, Meridian, 傷寒論 and 東醫壽世保元. And, in another 2 years, they also learned clinical Korean Medicine for 2 years including Internal medicine, Acupuncture, Rehabilitation medicine, Pediatrics and so on, most of which are mainly topic on 東醫寶鑑 and 東醫壽世保元. Moreover, the students who want to be a scientist enter the Graduate school of Korean Medicine, and they can continuously study the TKM using biological and chemical methodology.

Conclusions. In the future, Traditional Medicine will be needed to be evidence-based and personalized. Both development of medical practice and scientific research are essential for TKM to be upgraded to a personalized future medicine.

EL-6

The role of the complementary medicine in cancer treatment – Including the Korean medicine

Kim In Tae

Jangdeuk Korean Medical Hospital Immune Cancer Clinic, 51, Seochojungang-ro, Seocho-gu, Seoul, Korea

Background.

The incidence of cancer is increasing every year in Korea, 3.5% of annual increasing average. Cancer has been ranked as the most fatal disease for 7 years in Korea. For this reason, the importance of cancer treatment is a matter of concern.

The conventional treatments of cancer are operation, radiation therapy and chemotherapy. However, they are not perfect and have adverse side effects. As a result, something is needed to complement them.

Many treatments of the complementary medicine, including Korean medicine, are effectual in treatment of cancer, such as herbal medicine, pharmacopuncture, moxibution, mega dose of vitamin C, mistletoe, thymosin alpha 1, hyperthermia, etc. It is called immune therapy. The immune therapy is effectual to cancer by itself, but it is also a good complementation for conventional treatments.

Results.

With immune therapy, adverse side effects of chemotherapy such as vomiting, nausea, and peripheral neuropathy are decreased. In addition, the efficacy of chemotherapy can be increased with the therapy.

Conclusions.

The better result of cancer treatment is expected with the combination of conventional treatment and immune therapy.

EL-7

Integrating traditional Chinese medicine healthcare into diabetes care by reducing the risk of developing breast cancer among type 2 diabetic patients: A population-based case control study

Chien-Tung Wu¹, Jung-Nien Lai^{1,2,3}, Yueh-Ting Tsai²

¹*Institute of Traditional Medicine, School of Medicine, National Yang-Ming University,*

No.155, Sec.2, Li-Nong Road, Taipei 11221, Taiwan

²*The Graduate Institute of Integrated Medicine, China Medical University, Taichung City*

³*Department of Chinese Medicine, Taipei City Hospital, Yangming Branch, Taipei, Taiwan*

Background. Women with type 2 diabetes have higher risk to develop breast cancer. In Taiwan, traditional Chinese medicine is widely used to treat diabetes; however the influence has not been studied.

Our previous study indicated that the traditional Chinese medicine (TCM) formula Liu-Wei-Di-Huang-Wan, which consists of six type of herbs, is the most frequently prescribed herbal formula used to treat type2 diabetes patients.

Objectives. The aim of the study was to evaluate the integration of TCM into diabetes care in terms of how it reduces the risk of developing breast cancer.

Methods and Methods. Extracted from 1 million patients from National Health Insurance Research Database, 30,879 women were with type 2 diabetes were recruited. We analyzed the usage of traditional Chinese medicine and estimated the risk of breast cancer with Cox proportional regression model. Two models were constructed in order to explore two types of exposure assessments including prescription of TCMs (model 1) and prescription of different estimated dosages of Liu-Wei-Di-Huang-Wan (model 2).

Results. There are more than 80% of women with type 2 diabetes used traditional Chinese medicine. The most common prescribed formulas were Liu-Wei-Di-Huang-Wan series. Patients who used either traditional Chinese medicine or Liu-Wei-Di-Huang-Wan series Model 1 found that, in comparison with non-TCM users, TCM users have a decreased risk of developing breast cancer (HR: 0.72, 95%CI: 0.55-0.93). Model 2 indicated that Liu- Wei-Di-Huang-Wan TCM users have the least risk of developing breast cancer (HR:0.47, 95%CI: 0.30-0.73) as compared with non-TCM users.

Conclusions.

Integrating TCM healthcare into diabetes care was found to be associated with a decreased risk of developing breast cancer. Having recognized the use of TCM, exploring any potential interactions and adverse effects, and integrating both technologies into a holistic treatment system may be beneficial to the development of breast cancer on patients with type2 diabetes.

EL-8

Beneficial effect of *Vitis thunbergii* (小本山葡萄) on osteoporosis: From *in vivo* to *in vitro* study

Wen-Fei Chiou, Yu-Ling Huang, Yu-Jou Huang

National Research Institute of Chinese Medicine, No. 155-1, Section 2, Li-Nong Street, Beitou District, Taipei 11221, Taiwan

Background. Osteoporosis is characterized by skeletal degeneration with low bone mass and destruction of the micro architecture of bone tissue which is attributed to various factors including inflammation and aging. Women are more likely to develop osteoporosis than men due to the reduction in estrogen during menopause, leading to decreased bone-formation (mediated by osteoblasts) and increased bone-resorption (mediated by osteoclasts) activity. Currently available agents used to treat osteoporosis are major based on the inhibition of osteoclastic bone resorption to prevent further bone loss. Drugs with anabolic effects have recently received much attention for osteoporosis therapy. These pharmacologic agents can ultimately stimulate new bone formation, enhance bone density, reduce bone fracture, and promote bone health. *Vitis thunbergii* Sieb. and Zucc. (*Vitis ficifolia* Bge. Vitaceae) is a famous herb traditionally used in Taiwan for treating diarrhea, jaundice, hepatitis, fracture, and injury. Accumulating use experience suggests an alcoholic drench of the roots of *V. thunbergii* also helps cure bone fractures, contusions and prevents bone loss, suggesting that this herb might either stimulate new bone formation or inhibit bone resorption.

Objectives. These studies aimed to establish experimental evidence concerning the therapeutic benefit of *V. thunbergii* on bone metabolism, and clarify which components contribute to this beneficial effect.

Methods. Anti-osteoporotic potential of *V. thunbergii* was evaluated in ovariectomized mice. In brief, female C57BL/6J mice were bilateral ovariectomized (OVX). Two weeks after surgery, the OVX mice were administered with VtR (a mixture of special processed *V. thunbergii*) orally for 8 weeks. In *in vitro* study, primary mouse bone marrow cells (BMCs) or MC3T3-E1 cells were cultured in osteogenic induction medium. Cell differentiation and mineralization were identified by alkaline phosphatase (ALP) activity and Alizarin red S staining, respectively. RT-PCR and western blot were used to analyze the expression of osteoblast-associated genes and signal molecules. The transcriptional activity of estrogen receptor (ER) was also assessed. On the other hand, bone marrow macrophages or RAW264.7 cells were cultured in differentiation medium to induced osteoclast differentiation. The function of osteoclasts was monitored by bone resorption and proteolytic activity. Western blot and immunoprecipitation were also used to analyze osteoclast-associated proteins expression and signaling pathways.

Results. Many stilbenes were found in the roots of *V. thunbergii*. Bioactivity assay revealed that (–)-vitisin B and ampelopsin C increased ALP activity and bone nodule formation in cultured osteoblasts. Instead of stimulating osteoblastogenesis, (+)-vitisin A dramatically repressed osteoclasts differentiation and bone resorption. The results showed that *V. thunbergii* composed of diverse components to reciprocally drive

osteoblastogenesis and interdict osteoclastogenesis, we therefore prepared a special ingredient concentrated with these three components (named as VtR) and evaluate its anti-osteoporotic potential in mice started two weeks after ovariectomy. VtR treatment for 8 weeks significantly ameliorated the deterioration of bone mineral density and reversed all the ovariectomy-induced changes in μ -CT parameters. The anti-osteoporotic effect of VtR accompanied decrease in serum levels of C-terminal telopeptides of type I collagen (CTX), interleukin-7, and ratio of RANKL/osteoprotegerin (OPG). Further mechanism studies indicated that vitisin B might act through ER-mediated activation of Src and downstream MAPK to stimulate osteoblastogenesis which contributed to its beneficial effect in bone synthesis. Another aspect, (+)-vitisin A suppressed bone resorption possibly via interruption of RANKL-induced TRAF6 ubiquitination and associated downstream signaling pathways. Furthermore, action through negative regulation of the proteolytic activity of MMP-9 and cathepsin K might also contribute to the anti-resorption effect of (+)-vitisin A.

Conclusions. The current study indicates *V. thunbergii* has the potential to protect bone integrity *in vivo*. That is, treatment with VtR at two weeks after ovariectomy significantly attenuated the dramatic decrease in BMD and deterioration in trabecular bone architecture after ovariectomy. The possible mechanism was through up-regulation of bone formation and reciprocal down-regulation of bone resorption attributed to its diverse constituents. This study proving VtR could be a promising alternative agent for managing of postmenopausal bone loss.

EL-9

Current state of ISO – terms and concepts and their management

Yasuyuki Hirose

*Medical Informatics, Hospital, University of the Ryukyus, Uehara 207, Nakagami,
Okinawa 903-0215, Japan*

Background. Many philosophers, e.g., Aristotle, Kant, and Wittgenstein, pointed out the necessity of utilizing appropriate words for accurate perception and consideration within their ontology, epistemology, logic, and the context, which they are embedded. Ogden and Richards also illustrated it in their diagram of *Semiotic Triangle*.

In modern medicine, great deal of efforts have been spent to standardize vocabularies for over a hundred years but not accomplished yet. In traditional medicine, such efforts are just getting started. Conflicts among words or the meanings of words would result in the misunderstanding of interpretation of clinical trials, education, international trade, and so on. Terms and definitions in international standards are often serious matters for each nation's interests. ISO have developed several normative documents for standardization of contemporary terminologies with utilizing information technology on knowledge management. The author will introduce their methodology and illustrate the related issues in his presentation, for the designers and developers of terminologies.

Problems. 1A) Many synonyms, polysemes, and homonyms; 1B) both the equivalence and the differences of meanings among them are not explicitly assured or expressed in machine processable representation; Indifference to: 2) domain constraints; 3) harmonization; 4) level of specialization.

Principles. 1) Concept-oriented; 2) Identification of values in each domain constraint; 3) Dissolution of tight binding among concept-term-object; 4) Re-integration of binding among them.

Methods: Handling of backbone concept structures of terms.

1. Concept, characterizing values, domain constraint

Concept in a concepts system is a unit of knowledge created by a unique combination of characteristics. Concepts are not necessarily bound to particular languages. They are influenced by the social or cultural background, which often leads to different categorizations.

Characteristic is the abstraction of a property of an object or of a set of objects. Object is an anything perceivable or conceivable that may be material, immaterial or imagined. Characteristic is formally represented with the pair of a semantic link and a characterizing concept, as an attribute-value pair. Characterizing concept or value is expressed by a designation to a specific concept or an individual concept. Individual concept corresponds to only one object, and specific concept has a generic relation to a certain generic concept.

In a generic relation, generic concept has the narrower intension and the wider extension than their specific concepts. Generic concept is also called category, and the specific concept is a member of the extension of it.

In other words, specific concept is an instance of a category, *i.e.*, its generic concept.

Generic concept, which contains characterizing concepts or values that the semantic links refers to, is called characterizing generic concept, characterizing category, or value domain. Values in a value domain shall be valid in a certain domain or subject field. Consequently, value domains are influenced by a certain contexts in a certain generic relations to a certain generic concept in a certain domain. These rules are called domain constraints.

Therefore, the minimal set of domain constraints in a certain domain specifies its distinctions. When representing a concept system, such minimal sets are called categorial structure of the domain. Categorial structure is described by the combination of semantic links in a concepts system and their characterizing categories, *i.e.*, value domains.

2. The Semiotic Triangle and the Level of specialization

Concept, term, and objects shall validly correspond with each other in the Semiotic Triangle. Concept and the corresponding objects are usually designated by term and code in a concept system.

Term is a verbal designation of a general concept in a specific subject field or domain. A general concept corresponds to two or more objects, which form a group by reason of common properties: e.g. 'tower.' On the other hand, individual concept is designated by an appellation or name: e.g. 'the Eiffel Tower.'

The general concept for the objects of 'tower' consists of a combination of several semantic links and their characterizing categories. But the values or characterizing concepts are not specified yet. The general concept and the corresponding objects are usually designated by the term of 'tower.' In the individual concept and the corresponding object designated by the term of 'the Eiffel Tower.' The values that semantic links refer to are already specified or specifiable, within the precondition when the "the towers in France" are included in the targeted subject field, and consequently, the necessary values are contained in the value domains in the concept system.

3. Re-integration of binding among concept-term-object

In the framework mentioned above, this can be easily realized with specifying: 1) domains, 2) mapping capabilities and 3) mapping table among concepts, 4) designations, and 5) directions a/o notes.

Conclusion. There have already existed international standard documents. This means no need of hegemony in standardization of terms and concepts but both harmonization and the expressions for identifying domains: in (a) among nations or areas, and (b) traditional vs. modernized.

References.

- [1] ISO 1087-1:2000, Terminology work – Vocabulary – Part 1: Theory and application.
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- [3] ISO/DIS 17583, Health informatics – Terminology constraints for coded data elements expressed in ISO harmonized data types used in healthcare information interchange. 2015.

EL-10

Current state of the ISO - process relating to Kampo-TCM-Oriental medicine

Hans Rausch

*Phytochem[®], Referenzsubstanzen GbRmbH, Krumbacher Straße 9, D - 89335
Ichenhausen, Germany*

The great focus of traditional Asian medical systems are: Improvement of the acceptance on the worldwide market of evidence based natural therapeutic systems. For international progress ISO-Standardisation is a well established technique for a better market situation. The three great asian medicinal systems based on herbal knowledge of ancient China, - Kampo, TCM and Korean Oriental Medicine - use a great variety of raw materials (herbal drugs).

Negative information caused by problems in Europe result in a critical sight of regulating authorities in western industrial countries. Open discussions in a great group of worldwide experts in the frame of an ISO-process will give a new basis for this international implementation.

The requirements for remedies are also different in different countries, based on the legal status (Pharmacopoeia`s), so ISO can only be an additional system. In this frame also legality of products is a important item (e.g. typical Asian granules are illegal in Germany and also Europe). The Asian medicinal system based on herbal materials bring great opportunities also for other countries in the treatment of diseases and new market opportunities for the origin countries and also an improvement process for this products.

The ISO Technical Committee 249 with the name "Traditional Chinese Medicine" divided the workload in 5 great working groups and additional joint working groups as well. This 5 groups can be seen as 3 main focuses like Phytotherapy (WG1 Raw materials and WG2 Herbal based products), Other therapies (WG3 Acupuncture and WG4 Other devices) and at the end focused on the basic structures (WG5 Education, IT and Coding systems).

Luncheon Semminer

LS-1 Anorexia - cachexia syndrome and Kampo medicine

Akio Inui (Kagoshima Univ., Japan)

Sponsored by TSUMURA & Co.

Chair: Mosaburo Kainuma (Kyusyu Univ., Japan)

12:05 – 13:00 on April 16 (Sat.), Room A1

LS-2 Immediate pain relief by acupuncture. Randomized placebo controlled studies with press tack needles

Sven Schröder (University Medical Center Hamburg-Eppendorf, Germany)

Sponsored by Kotaro Pharmaceutical Co. Ltd., Kracie Kotaro Pharmaceutical Co. Ltd. and Osugi Kotaro Pharmaceutical Co. Ltd.

Chair: Hiromichi Yasui (Yasui Clinic, Japan)

12:05 – 13:00 on April 17 (Sun.), Room A1

Cachexia is among the most debilitating and life-threatening aspects of cancer, and is more common in children and elderly patients. Associated with anorexia, fat and muscle tissue wasting, psychological distress, and a lower quality of life (QOL), cachexia arises from a complex interaction between the cancer and the host, including cancer treatments such as chemotherapy. This process results from a failure of the adaptive feeding response seen in simple starvation, and cytokines play a pivotal role in long-term inhibition of feeding by mimicking the hypothalamic effect of excessive negative feedback signaling from leptin, a hormone secreted by adipose tissue which is an integral component of the homeostatic loop of body weight regulation.

Characterization of the feeding-regulatory circuitry revealed the important biochemical pathways and molecular targets for treatment of anorexia-cachexia syndrome. An example is ghrelin derived from the stomach which has an important role in triggering the adaptive response to starvation. Ghrelin improves anorexia, sarcopenia, gastrointestinal dysmotility and weight loss in various animal models of cachexia partly through NPY and insulin-like growth factor-1 (IGF-1). CRF and serotonin (5-HT) decreases plasma ghrelin, which are the key molecules underlying anorexia and muscle tissue wasting.

Traditional herbal medicine rikkunshito and its active component hesperidin stimulate ghrelin secretion from stomach by interrupting this 5-HT-CRF pathway via 5-HT₂ receptor antagonism. Another active component atracylodine potentiates the action of ghrelin by sensitizing the ghrelin receptor (GHS-R) on vagal afferents or on NPY neurons. Both the release of ghrelin and the potentiation of ghrelin/GHS-R signaling are important for mitigating ghrelin insufficiency and resistance, which are characteristics of anorexia-cachexia syndrome. Our recent study suggests that ghrelin signaling inhibits the development of sarcopenia during the aging process and extend survival in animal models of normal and pathological aging.

Although herbal medicines have not been fully accepted by mainstream medicine because of the complex nature of the formulae, the stringent quality control of Japanese kampo medicine and reproducibility of preclinical findings, together with few adverse events, have made herbal medicines more and more attractive for the management on intractable diseases such as cancer. The multi-component herbal medicines capable of targeting multiple sites could be useful for future drug discovery. Mechanistic studies and identification of active compounds could lead to new discoveries in biological and biomedical sciences.

LS-2

Immediate pain relief by acupuncture. Randomized placebo controlled studies with press tack needles.

Sven Schröder

*HanseMerkur Center for TCM at the University Medical Center Hamburg-Eppendorf,
Germany*

Objective: Acupuncture has a long tradition of empirical use in painful conditions. However, placebo controlled designs are a major problem of acupuncture experiments because insertion of the needles is usually perceptible. One approach to avoid the distortion of results is using press-tack needles (PTNs) as a verum group. These needles cause almost no sensation at the time of insertion and can be removed from the puncture site without obvious differences. PTNs have been compared with a press-tack placebos (PTPs), which is an identically looking device only lacking the needle element.

Primary adhesive capsulitis (AC) or frozen shoulder is an insidious and idiopathic disease. Severe pain is predominant in the first two of three stages which can last up to 21 months.

Methods: In the clinical study 60 volunteers with primary AC were randomly assigned to acupuncture treatment with PTNs or PTPs in a patient and observer blinded placebo-controlled study. In the experimental study 9 healthy subjects received PTN or PTP using a randomized double-blinded placebo-controlled design. Experimental pain was induced by trains of brief infrared laser pulses with assessment of verbal pain ratings. Acupuncture treatment was performed by using a balanced combination of meridians and acupoints on distant extremities avoiding local treatment.

Results: In the clinical study immediate improvement of 3.3 ± 3.2 points on Constant Murley Shoulder Score (CMS) pain sub score in the PTN group and of 1.6 ± 2.8 in the PTP group was seen ($p < 0.02$). In the experimental study mean pain ratings revealed a significant pain relieve when PTN was compared to PTP. Significant differentiation between the conditions started after one minute, increasing to the end of the 4th minute of laser pain induction.

Conclusion: These results provide evidence, that acupuncture can influence short term pain perception in experimental as well as in clinical settings. Our results suggest that adaptive central mechanisms are involved in acupuncture-induced analgesia. This tentative central effect of acupuncture has to be investigated in further neurophysiological experiments and clinical trials. The study confirmed, that PTNs and PTPs are a functioning option for double blind studies in acupuncture research.

Korea Session

10:00 – 16:55 on April 16 (Sat.)

Room A2

10:00 – 12:00 Sasang Constitutional Medicine Symposium

(Talk in English)

Chairs: Ho Soon Kim / 金鎬順 (ISOM Director / 國際東洋醫學會, Korea)

In-Tae Kim / 金仁泰 (ISOM Director / 國際東洋醫學會, Korea)

KS-1 Genomic analyses on constitutional type-related traits in Korean medicine

Seongwon Cha / 車誠原

(Korea Institute of Oriental Medicine (KIOM) / 韓國韓医学研究院, Korea)

KS-2 Researches on Sasang constitutional medicine (SCM) in Korea: trend and challenges

Sang-Hyuk Kim / 金相赫

(Korea Institute of Oriental Medicine (KIOM) / 韓國韓医学研究院, Korea)

KS-3 The future of the Japanese constitution of Sasang Constitutional Medicine

Akiko Hirota / 広田曄子 (Aki Clinic / 曄小児科内科, Japan)

13:00 – 16:00 Korea-Japan Oriental Medical Symposium

(Talk in Korean and Japanese)

Chairs: Do Young Choi / 崔道永 (Kyung Hee Univ. / 慶熙大学校, Korea)

Young-Shin Kim / 金英信 (Korea Society of Oriental Medicine / 韓國東洋医学会, Korea)

Yoshitomi Makoto / 吉富誠 (Fukuyoudou Clinic / 吉富復陽堂医院, Japan)

KS-4 History of Japan-Korea Oriental medicine cooperation / 日韓漢方交流の歴史

Yoshitomi Makoto / 吉富誠 (Fukuyoudou Clinic / 吉富復陽堂医院, Japan)

KS-5 Acupuncture for Smoking Cessation in Korea / 韓国の禁煙鍼

Do Young Choi / 崔道永 (Kyung Hee Univ./ 慶熙大学校, Korea)

KS-6 Thread-embedding Therapy of Korea / 韓国の埋線療法

Hyun-Jong Lee / 李滋宗 (Daegu Haany Univ. / 大邱韓醫大學校, Korea)

**KS-7 The truth of Shanghanlun(傷寒論) and its actual clinical application /
傷寒論の真実と臨床応用の実際**

Young-Beom Rho / 盧永範 (Korean Medical Association of Clinical Sanghan-
Geumgwe / 大韓傷寒金匱医学会, Korea)

KS-1

Genomic analyses on constitutional type-related traits in Korean medicine

Seongwon Cha

*Mibyeong Research Center, Korea Institute of Oriental Medicine, 1672 Yuseong-daero,
Yuseong-gu, Daejeon, 34054, Republic of Korea*

Background. Sasang constitutional type, a Korean system of traditional medicine, is a complex heritable trait in which heritability of each constitution type obtained by twin and family studies is 41 – 55%. The constitutional types can be classified by facial, bodily, vocal, and personality traits¹, which constitution-classifying traits are considered to be hereditary. Moreover, susceptibilities to cardiometabolic diseases have been known to be different between constitutional types. Therefore, it would be important to find genetic variants that might contribute to construction of constitutional type-related traits.

Objectives. To identify genetic variants associated with constitutional type-related traits, such as constitution-classifying traits, risk factors for cardiometabolic diseases according to constitutional types, and constitution itself, genomic analyses were used in large Korean populations.

Methods. Genome-wide association studies (GWASs) followed by confirmatory analyses were performed to elucidate genetic variants for constitution-classifying traits and constitution itself, using linear (or logistic) regression analyses in ~ 9,000 Koreans. In case of risks of cardiometabolic diseases, genetic effects of GWAS variants previously reported were recapitulated according to constitutional types, via longitudinal analysis covering 10 years with linear mixed model.

Results. For genetic variants on constitution-classifying traits, totally 10 genetic loci were identified: 7 loci for facial traits, 1 locus for thoracic-to-hip ratio, 1 locus for vocal thickness in women, and 1 locus for behavior based on Sasang personality questionnaire. For constitutional type-associated variants, it was corroborated that obesity-risk variants of FTO were inversely related with So-Eum type. In addition, distributions of variants affecting cardiometabolic risks in individuals aged over 40 were found to be different between constitutional types, especially overweight and diabetic risks between So-Yang and other types.

Discussion. The genetic variants associated with constitutional type-related traits can be applicable to group-based tailored medicine in order to prevent disease development, eg. from Mibyeong (未病) stage, and to improve the subject classification efficiency.

Conclusions. Using genomic analyses, genetic variants associated with constitutional type-related traits are identified reliably. It is possible to suggest that the variants can be useful to preventive medicine such as Sasang constitutional medicine.

References. 1. Do, J.H. and Jang, E. et al. BMC Complement Altern Med 12, 85 (2012).

KS-2

Researches on Sasang constitutional medicine (SCM) in Korea: trend and challenges

Sang-Hyuk Kim

Mibyeong Research Center, Korea Institute of Oriental Medicine (KIOM), 1672

Yuseong-daero, Yuseong-gu, Daejeon, Republic of Korea

Background. Sasang constitutional medicine (SCM) is a traditional Korean medicine based on the biopsychosocial perspectives that epitomizes personalized treatment and utilizes medicinal herbs for each type-specific treatment. SCM was developed by Je-ma Lee (AD 1837–1900) and published in his work of Donggusebowon (Longevity and Life Preservation in Eastern Medicine). In SCM, individuals are classified into one of four types of constitutions: Taeyang (TY) type, Soyang (SY) type, Taeum (TE) type, and Soeum (SE) type. Each Sasang constitution (SC) type has its own physiological and pathological features and tendencies towards specific illnesses.

Objectives. The purpose of this study is to take a look at the trend of the SCM researches in Korea.

Results & Conclusions. Recently, studies on SC type-specific psychological, physical and genetic characteristics have been conducted in SCM research field. These studies have been mainly carried out to develop an objective diagnostic method. Because the diagnosis of Sasang constitution (SC) type is crucial to clinical SCM practice, however it is also true that the diagnostic process is subjective and unreliable. But these studies showed the heterogeneity that might be the result of the variation in participant characteristics or unidentified clinical situations. To solve the problem, there was a need for the multicenter biobank including biological and clinical information based on SCM. KIOM has been developed a biobank called the Korean medicine Data Center (KDC) to provide the scientific basis of Korean medicine including SCM. It is expected that more studies might be progressed for providing the scientific advancement of SCM using the KDC with various data.

References

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KS-3

The future of the Japanese constitution of Sasang Constitutional Medicine

Akiko Hirota

Aki Shounikanaika Clinic. 2-30-11 Hon-amanuma, Suginami-ku, Tokyo, 167 Japan

Background. The human constitutions can be classified to the four constitutions by the Sasang constitutional medicine; 太陰人, 少陰人, 少陽人 and 太陽人. There are suitable foods and crude drugs for each constitution. The prescriptions of the Sasang constitutional medicine are composed by the suitable crude drugs for the each constitution. The ratio of the constitutions or the Japanese subjects was investigated by using the crude drugs.

Method. O ring test was used to test whether or not the herbal prescriptions fit the subjects. Actually the tester touches the crude drug to the subjects. At the same time the O ring is made by the tester's opposite fingers. The O ring will open when the herbal prescription does not fit the subject. It can be said that When the prescription for 太陰人 fits the subject, the subject is diagnosed to be a 太陰人.

The representative recipe for 太陰人 is 太陰調胃湯、for 少陰人 is 補中益氣湯 and for 少陽人 is 六味丸. These drugs are used to make diagnoses.

Results. The ratio of the 少陰人 is relatively large in Japanese subjects.

KS-4

History of Japan-Korea Oriental medicine cooperation / 日韓漢方交流の歴史

Yoshitomi Makoto / 吉富誠

Fukuyoudou Clinic / 吉富復陽堂医院, Japan

The history of Japan and Korea of traditional medicine exchanges can be traced back to the late Kofun period. The exchanges of both countries of traditional medicine have been repeated to the current, and then now Japan-Korea Oriental Medicine Symposium is holded in Korea Session. I will look back at the history of both countries of traditional medicine exchanges. And I will re-check the depth of the relationship. I will further outlook the future of exchanges.

KS-5

Acupuncture for Smoking Cessation in Korea / 韓国の禁煙鍼

Do Young Choi / 崔道永

Department of Acupuncture & Moxibustion, Kyunghee University Korean Medicine Hospital. 23, Kyungheedaero-ro, Dongdaemun-gu, Seoul, Korea

Background. The smoking population in South Korea has slowly declined since 1998, but this rate has hit a plateau recently. According to OECD Health Data, the total percentage of daily smokers who are over 15 is 19.9%, which is slightly higher than the OECD average (18.8%). Among the daily smokers who over 15, the percentage of male smokers in Korea hit 36.2%, landing in third place after Greece and Turkey among other OECD countries.

The U.S. Public Health Service defines smoking as a kind of disease, in order to emphasize the importance of smoking cessation. Likewise, the WHO marks World No Tobacco Day every year, on 31 May, in order to highlight the health risks associated with smoking since 1987.

In Korea, the Ministry of Health & Welfare has designated specific hospitals or local clinics to provide smoking cessation treatments as a part of nationwide smoking cessation policy since 2015, and Korean medical hospitals have been actively involved so that people can receive Korean medical treatment.

Objectives. The aim of this report is to introduce how acupuncture for smoking cessation is carried out in Korean medical hospitals, provide relevant evidence for acupuncture treatment, and report on the overall study trends.

Results. Studies related to acupuncture for smoking cessation in Korean medicine have been conducted actively since the '90s, and studies with high level of evidence such as RCTs and SRs have also been conducted internationally. Acupuncture for smoking cessation is based not only on Korean medical theories (meridian and collateral theories or viscera and bowel theories) but its mechanisms can also be well explained by modern physiological terms, especially to the modulation of vagal nerves. In Korean medicine as well, auricular acupuncture is mostly used, and other methods such as manual acupuncture is used as add-on treatment.

Conclusions. In Korea, Korean medical treatments including acupuncture is being actively prescribed for smoking cessation. Continuing interest and further studies for more acupuncture treatments related to smoking cessation are needed to promote better health care worldwide.

KS-6

Thread-embedding Therapy of Korea

Hyun-Jong Lee^{*}, Jae-Young Shin^{**}, Chang-Hyun Han^{**}

^{*} *Department of Acupuncture & Moxibustion, College of Oriental Medicine, Daegu Haany University*

136 Sincheondong-ro Suseong-gu, Daegu, Korea

^{**} *Clinical Research Division, Korea Institute of Oriental Medicine*

1672 Yuseong-daero, Yuseong-gu, Daejeon, Korea

Background. Thread-embedding therapy is the new acupuncture therapy which treats disease to give continuous stimulus by embedding foreign material using the special-designed device in the acupoint. Recently, instead of embedding animal or metal foreign material, suture thread made by polydioxanone is used. The purpose of thread-embedding therapy is to increase curative effect by extending stimulus duration including physical and chemical stimulus at acupoint.

매선요법은 특별히 고안된 기구를 사용하여 혈위에 이물질을 매입함으로써 지속적인 자극을 주어 질병을치료하는 신침요법이다. 최근에는 동물성 이물질이나 금속을 삽입하는 대신 수술용 봉합사를 사용한다. 매선요법은 혈위에 대한 물리, 화학적 자극 뿐만 아니라 자극 시간은 최대한 연장하여 치료효과를 증대시키는데 목적이 있다.

Methods. Searching the report on thread-embedding therapy, most of the studies were facial palsy, beauty, facial plastic care and obesity in the beginning. Recently, musculoskeletal pain like lumbar intervertebral disc herniation, knee osteoarthritis, ankle sprain is reported. And significant effect on neuropsychiatric disease like dementia, chronic tension-type headache is also reported. But most reports are case reports. Randomised controlled trial is insufficient state.

매선요법에 대한 논문을 살펴보면, 구안와사, 미용, 성형, 비만에 대한 연구가 초기에 많았으나, 최근에는 요추추간판탈출증, 퇴행성 슬관절염, 발목 염좌 등 근골격계 통증에도 응용되고 있다. 또한 치매, 긴장성 두통 같은 질환에서 유의한 효과가 보고되고 있다. 대부분의 논문이 증례 논문이고 무작위 대조군 연구는 부족한 실정이다.

Conclusions. Thread-embedding therapy could be considered as useful remedy which applies widely to various diseases in oriental medicine. In addition to various applications, we need randomized controlled trials of good quality about thread-embedding therapy.

매선요법에 최근 다양한 영역에서 널리 사용되는 유용한 치료법으로 사료된다. 더불어 매선에 대한 많은양질의 무작위 대조군 연구가 필요하다.

This study was supported by the Korea Institute of Oriental Medicine (Grant no. K16740)

Background. Shanghanlun, a book that is considered to be the basis for Korean medicine, was written in AD 200. However, as time went by, the significance and the meaning of Shanghanlun had been lost by the damage of original form and arbitrary interpretation of future generations.

Then one day, Gangpyeong-Shanghanlun(康平傷寒論), considered to be the most similar work to the original work of Shanghanlun, was excavated from Japan in 1936. Then, I translated and interpreted Shanghanlun to the language of when it was written, in order to figure out the real value of Shanghanlun

Objectives.

1. We hereby find the truth of Shanghanlun through resolving existing misunderstandings, and continued paleographical analysis and clinical report.

2. We hereby cognize the value of Shanghan medicine (傷寒醫學) by reinventing Shanghanlun.

Results.

1. Shanghanlun is never transmutation among Six-channels, but, instead, it is Shanghanlun Diagnostic System which diagnoses patients by categorizing Six-meridian diseases (六病).

2. Mai(脈) has been proved that it is not Radical pulse or Chon, Gwan, Cheok, but it was, in fact, action or movement in one's life, and this action in one's life is the one that causes diseases.

3. Topic sentences of Six-meridian diseases (六病提綱) are the fundamental causes for emergence of diseases. These topic sentences of Six-meridian diseases become criteria for diagnosis as they are the patterns for diseases that are not only common but also not controlled constantly.

In other words, based on Topic Sentences of Six-meridian diseases, we first categorizes and diagnosis the patterns that patients counteract against diseases. And then, using Shanghanlun provisions, we identify pathological changes of both body and mind that are followed when chief complain occurs or even deepens.

4. Shanghanlun has been proved that in fact, it was a medical report that carefully observed the changes of both body and mind, caused by internal reasons, and then healed the diseases by tracking down the causes.

Discussion. Since there might be a gap between paleographical analysis and medical trials, the true value of Shanghanlun can be realized through continued clinical research.

Conclusions. Shanghanlun is a medical book that changes and, at the same time, cures the intractable diseases of both body and mind that are caused by inner causes of our body.

Taiwan Session

13:00 – 17:55 on April 16 (Sat.)
Room B2

13:00 – 14:55 Special Lecture in Taiwan Session

TS-S Evidence-based medicine in acupuncture analgesia (talk with English)

Lin, Jaung Geng (China Medical Univ., Taiwan)

Chair: Chen, Chieh-Fu (National Yang-Ming Univ., Taiwan)

15:00 – 17:55 Taiwan Session

TS-1 The assessment of traditional Chinese medicine on the risk of dementia in stroke patients / 中醫藥治療對預防中風病人失智症之療效評估 (talk with English)

Shih, Chun Chuan / 施純全 (I-Shou Univ., Taiwan)

TS-2 Traditional Chinese Medicine Treatment for Acne / 痤瘡中醫療法及治療經驗 (talk with English)

Chen, ChaoTsung / 陳潮宗 (Taiwan Society of Chinese Medical Cosmetology, Taiwan)

TS-3 Misdiagnosed menopause symptoms / 易被誤診的停經症候群 (talk with Chinese)

Chen, Jing Ming / 陳俊明 (National Union of Chinese Medical Doctors' Association, Taiwan)

TS-4 Therapeutic experience on facial nerve palsy / 顏面神經麻痺之治療經驗 (talk with Chinese)

Li, Fong Yu / 李豐裕 (National Union of Chinese Medical Doctors' Association, Taiwan)

TS-5 The Clinical Application of Qing-Shang-Juan-Tong-Tang in the Treatment of Headache / 清上蠲通湯治療頭痛的臨床應用 (talk with Chinese)

Chen Chih-Fang / 陳志芳 (President, Taiwan Society of Chinese Medicine Andrology, Taiwan)

TS-6 WEN's Acupuncture : Modulation Autonomic Nervous of system / 溫氏直刺自律神經調控法 (talk with Chinese)

Wen Tsung-Kai / 溫崇凱 (Taiwan Clinical Chinese Medicine Association, Taiwan)

Chair: Lin, Jaung Geng / 林昭庚 (China Medical Univ., Taiwan)

and Chen, Jing-Ming / 陳俊明 (National Union of Chinese Medical

Doctors' Association, Taiwan)

TS-S

Evidence-based medicine in acupuncture analgesia

Lin, Jaung-Geng, MD, CMD, Ph.D.

China Medical University, Taiwan

No.91, Hsueh-Shih Road, Taichung, Taiwan

Background. Acupuncture has been used for thousands of year in China and currently accepted worldwide. It is applied to several kinds of disease; however, pain relieving is the most remarkable indication worldwide. It is needed to demonstrate the efficacy of acupuncture analgesia using modern techniques.

Objectives. Because of the remarkable effects of acupuncture on pain, we performed a series of clinical studies about acupuncture analgesia.

Methods. We performed randomized controlled trials to demonstrate the efficacy of acupuncture on pain.

Results. Our randomized controlled trials revealed the efficacy of acupuncture/electroacupuncture on pain relieving and on reducing side effects of morphine administration after surgery. Besides, acupuncture/electroacupuncture also showed efficacy on pains due to frozen shoulder, knee-joint, lower back, cesarean section and extracorporeal wave shock lithotripsy.

Conclusions. According to our results, acupuncture is an effective treatment in pain relief after surgery, or pain due to frozen shoulder, knee-joint, lower back, cesarean section and extracorporeal wave shock lithotripsy.

背景：中風是全球第二大死因且中風在大多數的國家也是導致成人失能的主要原因。心臟疾病、高血壓、糖尿病、抽菸、酗酒、不健康的飲食、腹部肥胖、缺乏運動、心理壓力及憂鬱症等因子包含了 90% 的罹患中風之風險。但儘管目前的醫學研究對中風已有相當的了解，其他與中風有關的因子仍需要後續研究。失智症是認知功能退化的一項慢性病，也是老年人的一項重要健康議題。失智症是中風後常見的後遺症，中風後的失智症決定了中風病人的長期存活率。過去文獻指出中風病人透過復健治療，如身體活動計畫介入，可改善行動功能，進而有效的減少中風病患發生失智症的風險。但截至目前為止，尚未有大型研究針對中風病患接受中醫藥治療是否能夠減少失智症之療效評估。

方法：本研究建立「2000-2009 年全民健康保險中風研究資料庫」，篩選 20 歲以上第一次中風病患，在中風前兩年內沒有罹患失智症者做為研究對象。本研究探討這群中風病人在中風後接受中醫藥治療的情形，比較有無接受中醫藥治療的中風病人的失智症發生率。利用多變項 Cox 回歸模型校正年齡、性別、低收入、都市化程度、中風住院是否在醫學中心、中風型態、及 10 項相關病史等，計算中風病患有無接受中醫藥治療的失智症危害比。

結果：本研究從 23 百萬台灣人口中，篩選 2000 年至 2004 年間 55,074 位接受中醫藥治療的初中風患者及 55,074 位未接受中醫藥治療的初中風患者進行傾向分數配對的世代研究，兩組患者皆持續追蹤至 2009 年，用 immortal time 校正後調查失智症的發生情形，我們利用 95% 信賴區間 (CIs) 計算分析針灸治療與中風後失智症的風險比 (HRs)。經過多變項分析後發現，中醫藥與降低失智症發生風險有關連 (HR, 0.70; 95% CI, 0.67-0.73)，且與性別、年齡、及所有中風型態均有顯著的關聯。

結論：接受中醫藥治療可以降低中風後失智症的發生風險。

關鍵詞：中醫藥、中風、失智

The assessment of traditional Chinese medicine on the risk of dementia in stroke patients

Shih, Chun Chuan^{1,2} (CMD, Ph.D.)

¹*School of Chinese Medicine for Post-Baccalaureate, I-Shou University, Kaohsiung, Taiwan*

²*Ph.D. Program for Clinical Drug Discovery from Botanical Herbs, Taipei Medical University, Taipei, Taiwan*

Stroke is the second leading cause of death worldwide and it is also the major cause of adult disability in the most countries. Heart disease, hypertension, diabetes, smoking, alcohol drinking, unhealthy dietary, abdominal obesity, lack of exercise, mental stress, and depression were associated factors that contributed 90% risk of stroke. Although we have understood the treatment, epidemiology, and prevention of stroke in the medical research, other factors associated with stroke need further studies. Dementia is a chronic degenerative disease of cognitive function and it is also an important health issue for the elderly. Dementia is a common sequela of stroke and it determined the long-term survival of stroke patients. Previous studies suggested that stroke patients who undergoing physical rehabilitation may have improved physical activity and reducing the risk of dementia, such as the intervention program of physical activity. Yet, there is no population-based study investigates the therapeutic effects of traditional Chinese medicine (TCM) on reducing risk of dementia in stroke patients.

Using insurance claims data from the National Health Insurance program, the purpose of this study is to evaluate the beneficial effect of TCM on the risk of dementia in stroke patients.

TS-2

痤瘡中醫療法及治療經驗

陳潮宗^{1,2} (中醫師, 哲學博士)

¹ 中原大學通識教育中心; ² 台灣中醫美容醫學會

前言：痤瘡，西醫稱為「面皰」、「青春痘」，中醫稱為「肺風粉刺」、「酒刺」，是青春期男女常見的皮脂腺毛囊慢性炎症，好發於 12~20 歲。其中，同年齡層患有痤瘡的男性比例更高達 85%；而女性則為 80%。

方法：本研究針對痤瘡患者 32 例，內服清熱解毒中草藥，聯合外科手術方式兼治之前後的痤瘡嚴重程度商數，體質及患者相片的變化及其個別的差異分析。

結果：32 例痤瘡患者在治療前後商數上均有顯著進步。

結論：證實內服清熱解毒中藥以改善體質、抑制痤瘡丙酸桿菌；外科手術清除膿皰及較為深層之痤瘡，積極去除外部病灶，二者聯合治療療效優異，是臨床治療痤瘡的較好方法。

關鍵字：中醫、夾痘、清熱解毒、痤瘡

Traditional Chinese medicine treatment for acne

Chen, Chao Tsung^{1,2} (CMD, Ph.D.)

¹ Chung Yuan Christian University, Chungli city 32023, Taiwan

² Taiwan Society of Chinese Medical Cosmetology, Taipei city 10361, Taiwan

Introduction: Acne, which is called pimples in Western medicine, and called pulmonary wind syndrome or acne in traditional Chinese medicine (TCM). It is the chronic inflammation of the hair follicle sebum, which is common between male and female at the age of 12-20. Besides, at the same stage of age, there is about 85% and 80% of male and female, respectively, contracting it.

Methods: In this research, the body constitution, severity score, and photos of the acne of 32 acne sufferers are evaluated before and after detoxification internal TCM and clip acne treatments.

Results: All sufferers of the acne made prominent progress in their score after therapies.

Conclusion: The outcome proved that this kind of TCM which function as to eliminate the toxin in the whole body can improve the body constitution, and constrain the growth of propionibacterium acnes. On the other hand, the surgery effectively eliminated pustules, deep acnes, and external lesions. The combination of the above-mentioned ways of therapies is a better method to cure the acne clinically.

Keywords: Acne, traditional Chinese medicine, clip acne treatment.

TS-3

易被誤診的停經症候群

陳俊明 (中醫師, 哲學博士)

中醫師全國聯合會副會長

一百年前, 台灣婦女平均餘命約五十。目前, 由於台灣社會環境、物質生活的進步及全民健康保險制度的實施, 國民活得更久, 如婦女的平均餘命已達八十三。女性停經時約為五十歲, 所以對另外三十年生命的生活品質, 值得吾人關切。

演講者將提供一些婦女可以度過不同停經期症狀的臨床經驗。尤其使用二仙湯處理熱潮、出汗、心悸、下背部疼痛及左歸丸處理骨質疏鬆的臨床應用方針及建議。

關鍵字: 停經症候群、二仙湯、左歸丸

Misdiagnosed menopause symptoms

Chen, Jing Ming (CMD, Ph.D.)

Deputy President, National Union of Chinese Medicine Doctors' Association, R.O.C

One hundred years ago the average life expectancy of women in Taiwan is about 50 years. Today, due to many advances in Taiwan social environment, the improvement material life, and the implementation of NHI (National Health Insurance) system, people are living longer. The average life expectancy of women in Taiwan is for 83 years. A time when menopausal women are 50 years old or so, the problem must be faced is that the extra 30 years of life, their quality of life are worthy of our attention and discussion going.

The speaker will present some clinical experiences in which women can go through a wide range of menopause symptoms. Especially, clinical guides and practical advice with traditional Chinese medicines used to relieve menopause symptoms, such as Er Xian Tang (二仙湯) to control hot flashes, sweating, palpitation, lower back pain and Zuo Gui Wan (左歸丸) to relieve osteoporosis will introduce.

Keywords: Menopause symptoms, Er Xian Tang, Zuo Gui Wan

TS-4

顏面神經麻痺之治療經驗

李豐裕^{1,2,3} (中醫師, 哲學博士)

¹ 中華民國中醫師公會全國聯合會副理事長

² 廣州中醫藥大學客座教授

³ 民生堂中醫診所院長

貝爾氏麻痺(Bell's palsy)是周邊型顏面神經麻痺中最常見造成顏面神經麻痺的症狀，其病因不明。其突發造成單側完全性顏面表情肌無功能或功能不全，影響病患日常生活及外貌，令患者困擾不已。

藉由筆者多年中醫內科臨床治療經驗，歸納分析以穩定神經、抗病毒、活血及補氣等治則，分階段用藥成功地縮短此病的療程，使病患完全康復。

關鍵字：中醫內科、貝爾氏麻痺、周邊型顏面神經麻痺、中藥。

Therapeutic experience on facial nerve palsy

Lee, Fong Yu^{1,2,3} (CMD, Ph.D.)

¹*Vice President of National Union of Chinese Medical Doctors' Association, R.O.C.*

²*Visiting Professor of Guangzhou University of Chinese Medicine*

³*Dean of Min-Sheng Tang Chinese Medical Clinic*

Bell's palsy is the most common peripheral types of facial nerve palsy. Its etiology is still unknown. Acute onset of Bell's palsy would cause complete malfunction or dysfunction of unilateral facial expression muscle, which would affect patients' daily life and appearance that bothers patients.

The author summarizes the therapeutic guidelines of Bell's palsy to stabilize the facial nerve, enforce antiviral immune response, promote blood circulation and nourish patients' vitality which based on the author's years therapeutic experience of Chinese internal medicine. Chinese medicinal herbs are prescribed in different stages and it shorten the treatment course successfully and recovery the disease completely.

Keywords: Chinese internal medicine, Bell's palsy, Peripheral types of facial nerve palsy, Chinese medicinal herbs.

TS-5

清上蠲痛湯治療頭痛的臨床應用

陳志芳^{1,2} (中醫師, 哲學博士)

¹ 台灣中醫男科學會理事長

² 台北市中醫師公會名譽理事長

清上蠲痛湯，是明代醫林狀元龔廷賢治頭痛第一方，原典《壽世保元》云：“一切頭痛主方，不問左右偏正新久，皆效。”其組成藥物為當歸、川芎、白芷、細辛、羌活、防風、菊花、蒼朮、麥冬、獨活、黃芩、蔓荊子、生甘草等，生薑煎服。

頭為諸陽之會，若風邪外襲，上犯巔頂，氣機阻滯，鬱而化熱、腦絡痺阻，氣血不暢，陽氣不能上煦，清濁相干，而見頭痛發作；故因風致瘀，因瘀致寒或致熱，因而生痛，為本病主要病機，治當祛風除邪、散寒通瘀止痛。方中黃芩、菊花、蔓荊子，疏風清熱、清利頭目；川芎、白芷、防風、細辛、羌活、獨活、蒼朮、生薑，辛溫散寒、祛風止痛；麥冬養陰潤燥，當歸養血行血，甘草調和諸藥。

以下是筆者採清上蠲痛湯隨證合用他方治療頭痛經驗：屬血瘀氣滯者，清上蠲痛湯合血府逐瘀湯加減治之；屬肝氣鬱結者，清上蠲痛湯合加味逍遙散加減治之；屬肝氣亢盛者，清上蠲痛湯合抑肝散加減治之；屬肝火上升者，清上蠲痛湯合柴胡清肝湯加減治之；屬氣血兩虛者，清上蠲痛湯合香砂六君子湯、四物湯加減治之。

關鍵字：清上蠲痛湯、風邪外襲

The Clinical Application of Qing-Shang-Juan-Tong-Tang in the treatment of Headache

Chen, Chih Fang^{1,2} (CMD, Ph.D.)

¹*President of Taiwan Society of Chinese Medicine Andrology*

²*Honorary President of Taipei Chinese Medical Association*

Qing-Shang-Juan-Tong-Tang (QSJT-Tang) is the first formula for treating headache by Gong Ting Xian (1522-1619), the champion of medical circles at Ming Dynasty. "QSJT-Tang is the main and useful formula for treating all kinds of headache, no matter migraine, frontal, acute or chronic headache." in his book "Shou-Shi-Bao-Yuan." The formula is composed of Angelicae Radix, Cnidium Rhizoma, Angelicae dahuricae Radix, Asiasri Radix, Notopterygii Rhizoma, Saposhnikovia Radix, Chrysanthemi Flos, Atractylolide Radix, Ophiopogonis Tuber, Angelicae tihou Radix, Scutellariae Radix, Viticis Fructus, Glycyrrhizae Radix and Zingiberis Rhizoma.

According to the traditional Chinese medicine theory, the head is the place where all the Yang meridians of hand and foot meet, and Qi and Blood of the five Zang organs and six Fu organs all flow upward to the head. If the pathogenic Wind invades the body, it can cause headache by blocking the circulation of Qi and Blood. Thus the mechanism of headache is caused by the pathogenic Wind which results in the stasis circulation inducing Chill or Heat; therefore, dispelling Wind, freeing stasis, dispelling Chill and clearing Heat are the principles for treating headache.

The effects of herbs in the formula are as follows: Scutellariae Radix, Chrysanthemi Flos and Viticis Fructus can dispel Wind and clear Heat; Cnidium Rhizome, Angelicae dahuricae Radix, Saposhnikovia Radix, Asiasri Radix, Notopterygii Rhizoma, Angelicae tihou Radix, Atractylolide Radix and Zingiberis Rhizoma can relieve pain by dispelling Wind and Chill; Ophiopogonis Tuber can nourish Yin and moisten dryness; Angelicae Radix can nourish and move the Blood; Glycyrrhizae Radix can harmonize those herbs.

The following successful cases are my clinical experience for treating headache: for headache pattern belonging to Qi stagnation and Blood stasis, it is treated with QSJT-Tang combining Xue-Fu-Zhu-Yu-Tang; for binding depression of liver Qi, it is treated with QSJT-Tang combining Jia-Wei-Xiao-Yao-San; for liver Qi exuberance, it is treated with QSJT-Tang combining Yi-Gan-San; for liver Fire flaming upward, it is treated with QSJT-Tang combining Chai-Hu-Qing-Gan-Tang; for dual vacuity of Qi and Blood, it is treated with QSJT-Tang combining Xiang-Sha-Liu-Jun-Zi-Tang and Si-Wu-Tang.

Keywords: Qing-Shang-Juan-Tong-Tang, wind

TS-6

清溫氏直刺自律神經調控法

溫崇凱 (中醫師, 哲學博士)

台灣中醫臨床醫學會理事長

筆者認為針灸原則為「定位」與「調節」。針刺重在取穴、定位與配伍，環扣相連方有調節之效。因此筆者整合傳統針灸、全息胚圖譜，與現代西醫學之生理學、藥理學，提出創新的「直刺病症的主管控制神經」：直接調控自律神經的針灸療法，這是醫學史上，首度直接調控神經的療法。

自律神經分交感與副交感神經，交感神經節段為 T1-L3，副交感神經節段為 S2-S4；二者多為相互制約、維持身體舒適或體內環境穩定；當其一神經機能失控或太過，則刺激或興奮另一神經系統，使之制約以達到治病效果。這是本療法精神所在。

自律神經控制內臟器官平滑肌收縮及腺體分泌。其節前神經元位於腦或脊髓，投射至自律神經節；節後神經元則投射至標的器官。筆者認為，處理自律神經相關疾病，宜：

1. 分辨自律神經節段的功能；
2. 找出控制病症的交感及副交感神經，以及彼此的制約；
3. 找出統屬該標的器官(投射至哪個內臟器官)的節段或尋找全息胚圖譜；
4. 即可直刺該神經節段或圖譜。

以頻尿為例，生理學上排尿屬副交感神經支配，頻尿為副交感神經過度興奮所致，可刺激交感神經約束之；藥理學則採用副交感神經拮抗劑、阻斷副交感神經信息傳遞物質，來提升膀胱收縮力。而針刺引起興奮效果，如欲產生抑制之效，則從興奮彼方神經著手。

當副交感神經過度興奮引起頻尿，可興奮交感神經以抑制之。腰椎 L1 與 L2 屬交感神經；其節後神經元投射之標的器官為膀胱，全息胚背部圖譜亦為腎(腎與膀胱相表裏)，故直接刺激交感神經 L1/L2 節段、促使內源性交感神經素釋放，即可治療頻尿。

關鍵字：針灸，神經調控，自律神經，交感神經，副交感神經，全息胚

WEN's Acupuncture : Modulation Autonomic Nervous System

Wen, Tsung Kai (CMD, Ph.D.)

President of Taiwan Clinical Chinese Medicine Association, Taiwan, R.O.C

The author believes that the right acupoints and adaption are basic principles of acupuncture. Therefore, select of right acupoints, accurate measurement, and match different related treatment, will work effectively to develop the adaption.

By integrate traditional acupuncture, Map of Embryo Containing the Information of the Whole Organism (ECIWO), physiology and pharmacology, of modern medicine, the author proposed an innovate therapy, as "Acupuncture on the nerve that control the disease" or "WEN's acupuncture that directly prod on autonomic nerves which modulate the diseases", this is the first medical therapy in the history of medicine.

The autonomic nervous system (ANS) consists of sympathetic and parasympathetic nerves, the segments for the former are thoracic 1 (T1) to lumbar 2 (L2) or L3, while the segments for the latter are sacral 2 to 4 (S2-S4), which are mutual restriction to maintain the well-being or constancy of the internal environment of the organism.

It may irritate one in the event that is out of control or reacting overfly. Reaching the effect of therapy in terms of the mutual restriction of nervous function is the spirit of the presenting therapy hereof. The ANS manipulates smooth muscle contraction and glandular secretion of the internal organs, and its preganglionic neurons are located in the brain or medulla spinalis and reflect on the segment of the ANS, while the postganglionic neurone reflect on the objective organ. Thus, for the treatment of ANS related disease, following steps should be considered,

The first step, distinguish the function attribution for segments of the ANS.

The second step, find out the main controller of nerves for disease and the counterparty in the mutual restriction.

The third step, search the segment attributed to the objective or Map of ECIWO.

The final step, conduct the perpendicular insertion on the segment of the nerve or map.

Take Frequent Urination (FU) for example, it belongs to the domination of the parasympathetic nerve in terms of physiology. Generally speaking, FU results from the hyperfunction of the parasympathetic nerve, which can be constrained via irritating the sympathetic nerve. In the perspective of pharmacology, the parasympathetic nerve antagonist, by means of blocking the transmitters of the parasympathetic nerve, promotes contraction of the bladder. Owing to the excitation effect of prod, it can excite nerves of the other party, in order to reach the effect of suppression.

FU results from the overactivation of the parasympathetic nerve, and it can restrain the parasympathetic nerve through the activation of the sympathetic nerve. Moreover, L1 and L2 belong to the sympathetic nerve and the postganglionic neurone reflects on the bladder as the objective organ, while the backside of Map of ECIWO (kidney and bladder are interior-exteriorly related) is for use of kidney. Thus, it can cure FU through acupuncture the L1/L2 segments of the sympathetic nerve through the release of endogenous substances.

Keywords: acupuncture, neuromodulation, autonomic nervous, sympathetic nerve, parasympathetic nerve, ECIWO

Japan Session

(Medical Symposium 2)

(talk with Japanese)

10:00 – 12:00 on April 17 (Sun.)

Room B1

Chair: Keisuke Hagihara (Dept. Kampo Med, Osaka Univ. Grad. Sch. Med., Japan)

萩原圭祐 (阪大院医漢方医学寄附講座)

Nakata Hideyuki (Kampo Medicine Center, Nerima Sogo Hospital, Japan)

中田英之 (練馬総合病院漢方医学センター)

JS-1 Overview of the role of the oriental medicine on the frailty and sarcopenia – the evidence of anti-sarcopenic effect of Go-sha-jinki-Gan (GJG 牛車腎気丸) /
フレイルサルコペニアでの東洋医学の役割—オーバービュー～牛車腎気丸の抗サルコペニア効果について

Keisuke Hagihara (Dept. Kampo Med, Osaka Univ. Grad. Sch. Med., Japan) /

萩原圭祐 (大阪大学大学院医学系研究科漢方医学寄附講座)

JS-2 Disease Modifying therapy of Alzheimer's disease in the near future – from the aspect of psychological frailty – /

アルツハイマー病治療の今後の展望について—精神心理的フレイルの側面から—

Shinji Tagami (Dept. Psychiatry, Osaka Univ. Grad. Sch. Med., Japan) /

田上真次 (大阪大学大学院医学系研究科精神医学)

JS-3 The consideration of frailty from the point of view of home pharmacist /
在宅薬剤師の立場からフレイルを考える

Teramoto Hitoshi (Aoi pharmacy, Japan) / 寺本 仁 (あおい薬局)

JS-4 Collaborative approaches to frailty in Oriental medicine /

フレイルに対する東洋医学連携アプローチ

Nakata Hideyuki (Kampo Medicine Center, Nerima Sogo Hospital, Japan) /

中田英之 (練馬総合病院漢方医学センター)

JS-1

フレイルサルコペニアでの東洋医学の役割—オーバービュー～牛車腎気丸の抗サルコペニア効果について

萩原圭祐

大阪大学大学院医学系研究科漢方医学寄附講座

背景 超高齢社会を迎える本邦では、要介護・寝たきりの対策が、重大な社会問題となっている。近年、高齢者の介護前段階を、フレイルと呼ぶことが提唱された。フレイルには、ロコモティブシンドロームやサルコペニア（加齢性筋肉減少症）を背景にした身体面、うつ・認知症を背景にした精神・心理面、独居や閉じこもりを背景にした社会面が挙げられている。本シンポジウムでは、全人的医療を掲げる東洋医学のフレイル対策における可能性を議論していく。初めに、フレイル・サルコペニアの概念と東洋医学との関連、大阪大学漢方医学寄附講座で明らかにされた牛車腎気丸の抗サルコペニア効果の分子機序を解説する。次に、心理的フレイルとして認知症における基礎研究、漢方治療のエビデンスについて大阪大学精神科田上真次先生が解説する。社会的フレイルへのアプローチとして、在宅における東洋医学的アプローチについて、薬剤士の寺本仁先生が、漢方と鍼灸の連携による寝たきり予防を試みている練馬総合病院中田英之先生が解説する。最後に総合討論を行い、東洋医学の役割を提言していきたい。

目的 従来の漢方医学では、サルコペニアなどの筋力低下は、腎虚概念に含まれなかったが、我々は、サルコペニアを腎虚の一症状と考え、老化促進マウスである SAMP8 マウスが腎虚モデルマウスとして適切ではないかと仮説を立て、牛車腎気丸を投与し SAMP8 マウスの骨格筋への作用を検討した。

方法 SAMP8 マウスに 8 週齢から普通食もしくは牛車腎気丸を服用させ、38 週まで飼育し、下腿筋肉、とくにヒラメ筋について組織学的・分子生物学的手法を用いて検討した。対照群としては、遺伝背景が同一のコントロールマウスを使用した。

結果 老化促進マウスでは、サルコペニアに特徴的である筋萎縮と線維化、速筋の減少が確認され、サルコペニアモデルとして適切であることが確認され、牛車腎気丸を服用させると筋萎縮が改善された。その作用機序として、インスリン/IGF-1 シグナルの増加・ミトコンドリア機能の回復、炎症性サイトカインである TNF- α の産生抑制が関わっていることが明らかになった。

考察 牛車腎気丸の持つ抗サルコペニア効果はフレイルの身体面での予防や治療に有望であることから、今後、様々な臨床試験を行っていく必要があると思われる。大規模な臨床試験を行っていく上で必要な基礎的な臨床データとして、当講座で行われた少数例でのオープン試験や、比較対照試験の結果も紹介する。

結論 東洋医学における腎虚概念を踏まえたフレイル対策は有効であり、牛車腎気丸は、その中心薬剤となる可能性が考えられる。

参照 1. Yuki Kishida et al. Phytomedicine 2015, doi:10.1016/j.phymed.2014.11.005

2. 萩原圭祐：サルコペニアと漢方療法の可能性について、医薬ジャーナル、51(9)、87－94、2015

**Overview of the role of the oriental medicine on the frailty and sarcopenia –
the evidence of anti-sarcopenic effect of Go-sha-jinki-Gan (GJG 牛車腎気丸)**

Keisuke Hagihara

Dept. Kampo Med, Osaka Univ. Grad. Sch. Med., Japan)

Background. In Japan, we have faced the super-aged society, which have a big social problem of care and bedridden for elderly person. Frailty means the elders who need care in the near future. Frailty is composed of three aspects. The first is the physical aspects containing muscle, osteoporosis and pain. The second is the mental aspects including depression and dementia. The third is the social aspects e.g. solitude and housebody. In this symposium we will discuss about the role of the oriental medicine on the frailty and sarcopenia. At the beginning I will describe the concept of frailty and sarcopenia, which is related the Oriental medicine. It will be shown the evidence of anti-sarcopenic effect of Go-sha-jinki-Gan (GJG 牛車腎気丸). Dr. Tagami will show the pathological mechanism of dementia and the evidence of Kampo medicine from the point of view mental aspects of frailty. Pharmacist Teramoto and Dr. Nakata will show the role of Oriental medicine at the home patients from the point of view social aspects of frailty. Finally, we will propose the role of the oriental medicine at a round-table discussion.

Objectives. We investigated the effect of GJG on aging-associated skeletal muscle atrophy by using senescence-accelerated mice (SAMP8) based on the concept of *kidney deficiency* (腎虚)

Methods. Seven-week-old male SAMP8 mice were divided into 2 groups: those fed a normal diet and those fed a normal diet supplemented with 4% (w/w) GJG (n=10). At 38 weeks, the mice were euthanized and tibiae were removed. Soleus muscles were stained with H&E and evaluated microscopically. Fiber type distribution as a percentage was calculated using anti- SERCA1 ATPase. The sera of mice were evaluated using a mouse IGF-1 ELISA system. The soleus muscles were homogenized and analyzed by western blotting.

Results. Immunohistochemical and western blotting analyses clearly showed that GJG significantly reduced the loss of skeletal muscle mass and ameliorated the increase in slow skeletal muscle fibers in SAMP8 mice compared to SAMR1 mice. GJG elevated the levels of serum IGF-1 in SAMP8 mice, which improved the phosphorylation of Akt, GSK-3 β and FoxO4. The phosphorylation of AMPK and mitochondrial-related transcription factors such as PGC-1 α were increased after GJG treatment. The expression levels of TNF- α were elevated in SAMP8 mice, whereas GJG suppressed its level.

Discussion. GJG suppressed sarcopenia via normalizing signal transduction through the IGF-1-Akt axis, mitochondrial-related transcription factors, and suppressed TNF- α in SAMP8 mice.

Conclusions. GJG is a promising drug for relief from sarcopenia. Oriental medicine could play an important role on the frailty and sarcopenia based on the concept of *kidney deficiency* (腎虚).

References. 1. Yuki Kishida et al. Phytomedicine 2015, doi:10.1016/j.phymed.2014.11.005

背景. 認知症の最大の危険因子は加齢である。85 歳以上の年代層において認知症と軽度認知機能障害を含めた有病率は実に 55 %にも上る。つまり認知症は高齢になると誰もがなる疾患であり、先進諸国では極めて一般的かつ社会的な疾患である。

目的. アルツハイマー病脳には老人斑(A β 42 の蓄積) が例外なく認められる。これが神経変性を促進していると考えられている。近年の研究で A β 42 の蓄積はアルツハイマー病発症の 10 年以上前から起こっていることがわかってきた。今回、アルツハイマー病の早期診断・根本治療など今後の展望について解説する。また現在の認知症治療、とりわけ BPSD に対して実際に有効性が示されているいくつかの漢方薬について解説する。

方法. 我々は脳プロ・脳老化研究においてアルツハイマー病発症前診断マーカーの開発を進めている。中核的プロジェクトは脳内アミロイド蓄積を血液バイオマーカーでスクリーニングする方法の開発である。我々が開発した A β 42 サロゲートマーカーについて説明する。

結果. A β 42 サロゲートマーカーを用いた研究では、家族性のみならず孤発性アルツハイマー病においても A β 42 産生比率が上がっている可能性を示唆した。

考察. 今後の認知症治療は、発症前に脳内病理を診断し、例えば A β 42 をターゲットした予防薬などを早期に投与する治療にシフトすると予想される。これにはアミロイド PET や脳脊髄液中のアミロイド β 42 の低下などだけではなく、より簡便なスクリーニング検査の確立と、安全かつ有効な根本治療薬が必要である。

結論. これらの先進医療は、発症予防或いは発症の遅延化をターゲットとしている。それとは別に対症療法も必要不可欠である。漢方薬は認知症治療の上で特に BPSD に対して安全かつ有効に使える重要なツールの一つである。

参照

1. γ -Secretase modulators and presenilin 1 mutants act differently on presenilin/ γ -secretase function to cleave A β 42 and A β 43. Okochi M, Tagami S, et al. Cell Rep. 3(1)・42-51・2013
2. The 28-amino acid form of an APLP1-derived Ab-like peptide is a surrogate marker for Ab42 production in the central nervous system. Yanagida K, Okochi M, Tagami S et al. EMBO Mol Med. 1(4)・223-35・2009

Disease Modifying therapy of Alzheimer's disease in the near future

— from the aspect of psychological frailty—

Shinji Tagami

Dept. Psychiatry, Osaka Univ. Grad. Sch. Med., Japan

Background. Aging is one of the most prominent risk factors of dementia. The prevalence rate of dementia including MCI exceeds 50% for people elder than 85 years old. Thus, dementia is a very common disease and a serious social problem in developed countries.

Objectives. Amyloid-beta₄₂(A₄₂) is a major constituent of senile plaque, a pathological hallmark of Alzheimer disease (AD) brain. Accumulation of A₄₂ is considered to start ~15 years ahead of the disease onset, which triggers neurodegeneration. In this session, I would like to explain recent developments of early diagnosis and disease course modifying drugs. Also, I would like to mention some traditional Chinese medicines which are reportedly effective for BPSD.

Methods. In the strategic research program for brain science by ministry of education in Japan, our department has been trying to develop biomarkers which can predict the onset of AD. The core part of the project is to establish a blood biomarker. I would like to explain an A₄₂ surrogate marker which we developed.

Results. The analysis using cerebrospinal fluids of AD patients and the non-demented controls revealed that the ratio of A₄₂ in total A_{40/42} increased not only in familial AD but also sporadic AD. We succeeded in detecting and measuring fine amounts of these brain specific peptides in peripheral blood.

Discussion. Current clinical studies mainly performed in U.S.A and some European countries are aiming to prevent the disease onset. Amyloid PET is a strong tool which can visualize A₄₂ accumulation far before the onset. However, screening methods should be developed in order to use the imaging techniques more efficiently.

Conclusions. These trials to prevent the onset of AD should be continued. However, we currently need to care and give treatments to the patients. Among these, some traditional Chinese medicines are one of the major medications that can be used very effectively and safely especially against BPSD.

References.

1. γ -Secretase modulators and presenilin 1 mutants act differently on presenilin/ γ -secretase function to cleave A β ₄₂ and A β ₄₃. Okochi M, Tagami S, et.al. Cell Rep. 3(1) · 42-51 · 2013
2. The 28-amino acid form of an APLP1-derived Ab-like peptide is a surrogate marker for Ab₄₂ production in the central nervous system. Yanagida K, Okochi M, Tagami S et.al. EMBO Mol Med. 1(4) · 223-35 · 2009

背景 高齢者の介護前段階を意味するフレイルには、独居や閉じこもりなどの社会的要因も含まれ、多職種協働により改善が試みられているが、必ずしも有効とは言えないのが現状である。東洋医学は全人的治療を掲げていることから、在宅医療において、東洋医学的アプローチが有効である可能性が考えられるが、その有効性は、現在のところ不明である。

目的 在宅医療の中に、東洋医学的アプローチを組み込むことで、在宅患者のフレイルの改善が可能であることを、実例を踏まえて検討を行った。

方法 2010年2月2日より在宅訪問を行っており、主治医、看護師、薬剤師、ケアマネ、ヘルパー、デイサービスという西洋医療中心の在宅療養チームを編成していた。2015年からデイサービスの際に、練馬総合病院漢方内科を受診し、パレス鍼灸院で鍼灸治療を受けるように、漢方医と鍼灸師を編入した。あおい薬局は、在宅訪問の際に他の薬剤とともに、お薬カレンダーで服薬管理し、定期的に体調チェックを行った。舌と下肢の写真を撮影し報告書に添付し、多職種間ではFAXやメール、SNSなどを使って報告書を共有した。

結果 症例は、86歳、男性、独居で生活保護受給者である。脳梗塞の既往があり、2014年6～11月の間に冠状動脈ステント術、ペースメーカー植込み、ヘルニア、胆嚢摘出などで5回の手術を受け、体調が悪く、精神的に落ち込んでいた。訪問医と訪問薬剤師で西洋医療中心の在宅療養チームを編成し、排便コントロールが不良より便秘のため看護師が介入し、歩行困難から、ヘルパーが買い物、掃除、洗濯などの介助を行い、リハビリと入浴のためにデイサービスを利用した。しかし、患者は自覚症状が安定せず、不安が強くなると、自ら救急車を呼び入院するが、すぐに退院するということを数回繰り返したため、東洋医学的アプローチを導入するに至った。漢方医と鍼灸師、漢方薬剤師が関わることで気血水のバランスを整えられ、西洋医学では十分に改善できなかった下肢の浮腫や下腹部から太腿にかけての熱感、痛み、痺れが薄らぎ、精神的にも落ち着いて、患者は、自ら救急車を呼ぶことはなくなった。

考察 在宅訪問に東洋医学的アプローチを取り入れることにより、患者は身体状態が改善し、精神的に安定したと考えられる。東洋医学における心身一如の考え方は、社会的フレイルの改善に有効である可能性が考えられた。

結論 在宅医療におけるフレイル対策において、東洋医学的アプローチを取り入れることは、有効と考えられる。ただし、現場における東洋医学的な視点を、様々な医療スタッフに説明する必要があり、今後は、西洋医学にも東洋医学に理解のある薬剤師と鍼灸師の育成が必要と考えられた。

The consideration of frailty from the point of view of home pharmacist

Teramoto Hitoshi

Director of Nerima-ku Pharmaceutical Association, Aoi pharmacy, Japan,

Background. Frailty means the elders who need care in the near future, which contains the social aspects e.g. solitude and housebody. In the home medical care various medical aids have tried to improve frailty, however it is not always effective. It is considered the effectiveness of Oriental medicine on the home patients because Oriental medicine has the aspect of holistic medicine. But, it is unclear whether Oriental medicine is effective for the home medical care.

Objectives. To examine the effectiveness of Oriental medicine on the home medical care especially frailty, we have built a new home medical care organization adding the Oriental medicine approach.

Methods. From Feb 2010, we have started the home medical care, which consists of family doctors, nurses, pharmacists, care managers, caregivers, and day service mainly based on Western medicine. From 2015, we incorporated oriental medical doctors and acupuncturists into the home care system. At the day service home patients attend the department of Kampo medicine (漢方) in Nerima general hospital and receive the treatment of acupuncture at near acupuncture councils. Our pharmacy manages drug therapy monitoring using a medicine calendar and check the physical condition regularly. We attach photos of the tongue and lower limbs to the patients' reports, which are shared among the home medical care staffs using Fax, e-mail, and social network service.

Results. A case is 86 years old male, a solitude and a welfare recipient with a past history of cerebral infarction. From June 2014 to November 2014, he received the operative treatments five times, for example coronary artery stenting, plantation of a pacemaker, and herniation. He complained a poor physical condition and became depressed. We organized home medical care team. Nurses tried to manage the constipation. Caregivers helped household affairs e.g. shopping, cleaning, and washing. He attend the day service for the rehabilitation and bathing. But, his chief complain were still remain. When he felt the anxiety, he called the ambulance car himself. He was temporarily hospitalized several times. Oriental medical doctors and acupuncturists improved the imbalance of Qi, Blood and Water (気血水). Edema of lower limbs improved. Heat sensation, pain and numbness were diminished from the lower abdominal to the thigh. He became calm and did not called the ambulance car himself.

Discussion. Oriental medicine improved the physical condition of the home-care patient, which achieved the improvement of his mental balance. The concept of mind-body unity in the oriental medicine could play an important role in the home medical care of frailty.

Conclusions. Oriental medicine is promising for the home medical care of frailty. In the near future we have to educate pharmacists and acupuncturists to share an understanding of Western medicine and Oriental medicine.

背景：高齢者の介護前段階を意味するフレイルには、身体的、精神的、社会的側面があるが、この三つの側面は常に複合している。フレイルを進行させないためには、常にこの三つの側面を意識しながら、治療者、介護者、家族すべてが連携しなくてはならない。しかしながら、心疾患や肺炎、骨折など、急性疾患をきっかけに入院生活が始まった場合、急性期治療から亜急性期に移行する段階からフレイルを意識した連携介入は充分に出来ていない。今回は、急性間質性肺炎の急性期治療から、漢方治療を経て、鍼灸治療、訪問マッサージ治療まで、治療の段階に応じた連携を行い、フレイルを予防している一例を紹介する事で、フレイルに対する連携治療の重要性について論じてみたい。

症例：74歳女性。X年1/10日頃より感冒症状。2/13近医に入院し、抗生剤で治療するも、2/15に呼吸状態悪化、KL-6：6600、CRP:24、Dダイマー：159、FDP：298、アルブミンが発症後の2日間で3.0から1.7に低下、100%酸素でも血中酸素が維持できなくなり、挿管、人工呼吸器管理開始。KL-6 6000と高値より、間質性肺炎の診断にてプレドニゾロンパルス療法（1000mg×3day）開始、2/16にICUに入室となり、2/25までの間にプレドニゾロンパルス療法、エンドキサン投与、エンドトキシン吸着療法を2サイクル実施したものの、状態は徐々に悪化傾向を示し、発症後1ヶ月の3/11に呼吸状態がCPAP PEEP5 FiO2 0.45となった。

そこで、救急救命期を過ぎたと判断し、3/12にプレドニン40mgの内服と平行して胃管から十全大補湯エキス+麦門冬湯エキス+麻杏甘石湯エキスを投与したところ、急速に呼吸機能が改善し、2週間後の3/29には0.5L酸素で血中酸素濃度が保てる所まで回復した。

3/31に食事が開始され、歩行訓練が開始されると同時に、回復期に入ったと判断し、十全大補湯を減量して牛車腎気丸に変更すると共に、1日3度の血糖測定の機会を利用して刺絡を実施、同時に首筋と肩胛部に対しての温灸治療を開始した。その後、経過良好にて、内服プレドニンを20mgまで減量したところで4/13にリハビリ目的転院となった。その後、歩行訓練を中心にリハビリを実施、7/10にリハビリ病院を退院した。10月、気管切開部分の閉鎖のために入院をきっかけに腰痛を訴え、歩行困難となったため、10月から鍼灸及びあん摩マッサージ治療開始、脾虚も進んでいたため、漢方処方を桂枝加芍薬大黄湯、四君子湯、牛車腎気丸、に変更し、12月から訪問あん摩マッサージを含めた連携治療を開始し、腰痛治療を中心としたリハビリ訓練を継続し、歩行できる状態を保っている。

結語：高齢者医療においては、入院治療がフレイルの入口となる。急性期から回復期に入る段階で、適切な漢方治療を行い、また、帰宅後の鍼灸、マッサージ治療を平行することで、フレイルを予防する事が出来ると考える。その際には、医療資源を有機的に組み合わせて治療を行う事が肝要である。

Collaborative approaches to frailty in Oriental medicine

Nakata Hideyuki

Kampo (Japanese Traditional medicine) Medical Center, Nerima General Hospital, Japan

Backgrounds: Frailty which means preliminary state of nursing care in older adults has three aspects: physical, mental and social, which are always complex. All therapists, caretakers and families need to collaborate with considering patients in these three aspects not to progress to frailty. However, when patients are hospitalized for heart disease, pneumonia, bone fracture, and acute illness, preventive and cooperative frailty interventions have not been performed sufficiently at the stage shifted to sub-acute phase from acute phase treatment.

This time we will show an example for preventing frailty with collaborative treatment in response to the proper stage of the treatments from acute-phase treatment of acute interstitial pneumonia through a stage of Kampo treatment to acupuncture and moxibustion therapy and massage received at home. It discusses the importance of collaborative treatments for frailty.

Case report: A 74 year-old woman presented with cold symptoms starting from around 10th January X, admitted to a nearby hospital on 13th February and took a course of antibiotics. However, respiratory activities got worse on 15th February; KL16: 6600, CRP: 24, D dimer: 159, FDP: 298. Albumin decreased from 30 to 17 during two days after the acute event. Blood oxygen level could not be kept even at 100% oxygen, so intubation and artificial respiration management was started. As she was diagnosed with interstitial pneumonia because of the high level of KL-6: 6000, prednisolone pulse therapy (1000mg×3days) was given. She was admitted to the ICU on 16th February. Prednisolone pulse therapy administration of endoxan and two cycles of endotoxin absorption therapy were performed up to 25th February. However, her health condition was gradually getting worse and her respiratory status became CPAP PEEP5 FiO2 0.45 on 11th March after one month in the onset of the acute event.

Then, it was determined that her emergency phase was over. After Zyûzen-taihotô (十全大補湯) + Bakumondôtô (麦門冬湯) + Makyo-kansekitô (麻杏甘石湯) were given through a stomach tube with a combination of the internal use of prednisone 40mg on 12th March, her respiratory function started to improve rapidly. Two weeks later on 29th March, she recovered enough to keep her blood oxygen concentration in 0.5L oxygen.

It was determined that she entered into recovery phase when she started eating and gait training on 31st March, then prescription was changed to reduced Zyûzen-taihotô (十全大補湯) and Gosya-jinkigan (牛車腎気丸). Additionally bloodletting was performed when she measured her blood sugar for three times per day. Simultaneously, warm therapy (using a hot pack filled with brown rice, rice bran and coarse salt, which is heatable in the microwave oven) applied to the back of her neck and groin area was started. As she was progressing favorably, hospital transfer for her rehabilitation was implemented once oral predonine was

reduced to 20mg. After this, she focused on gait training in her rehabilitation and then returned home from the rehabilitation hospital on 10th July.

In October she presented with her back pain and gait disturbance when she was hospitalized for closing the tracheostomy part, so therapies of acupuncture & moxibustion and Anma (Japanese massage) were initiated from October. Kampo prescription was changed to Keishi-ka-shakuyaku-daiôtô (枝加芍薬大黃湯)、Shikunshitô (四君子湯)、Gosya-jinkigan (牛車腎気丸) because her spleen Qi had gotten weaken. Collaborative treatments including Anma massage received at home have been initiated and rehabilitation focused on getting rid of back pain has been performed since December. She has remained stable to be able to walk.

Conclusion: Hospitalization treatment will be the entrance of frailty in medical care for the elderly. It is assumed that proper Kampo treatment in combination with acupuncture & moxibustion and massage therapies are efficient for frailty prevention at the stage when entering into the recovery phase from the acute phase. In such case, it is critical for us to give treatments with a combination of different medical resources organically.

The Toumonkai 藤門会 Special Session in Okinawa

With Dr. Shou 鍾先生 & Dr. Tei 鄭先生 from Taiwan

(talk with Japanese and Chinese)

12:00 – 16:00 on April 16 (Sat.)

Room C1

The Symposium On Jyoukitou 「承氣湯類」 and related prescription

Chair: Takao Namiki / 並木隆雄 (Chiba Univ. ,Japan / 千葉大学)

- TM-1 The study of the pathology of “shitimotsukoubokutousyou (七物厚朴湯証)” /**
七物厚朴湯証の病態考察
Yoshihiro Fukuta / 福田佳弘
- TM-2 Tiao Wei Cheng Qi Tang (調胃承氣湯) for the treatment of Immune
thrombocytopenic Purpura (ITP) / 以調胃承氣湯治療原發性紫斑症**
Shou Shinlei / 鍾箴禮
- TM-3 A secondary amenorrhea woman had led to get pregnant and safety delivery
by a long-term(including 14months before her pregnancy and the whole
gestation period)continuous medication of Dai-Joki-to (大承氣湯) combined
with Dai-Saiko-to (大柴胡湯) /大承氣湯合大柴胡湯の長期（妊娠 14 ヶ月前から妊
娠の全期間）投与による妊娠・出産に至った二次性無月経の一例 ～ 症例と古典よ
り、大承氣湯と大柴胡湯の病態異同を検討～**
Chiensho Lai / 賴建守
- TM-4 Compare with the three types of Chenqi Tang (承氣湯) described in the
“Shang Han Lun(傷寒論)” and clinic use, with Huanglian Tang(黃連湯) to treat
colon cancer stage 4 /由三承氣湯的古典條文分析比較與臨床運用，合黃連湯治療
大腸癌末期病例**
Tei Kousoku / 鄭宏足
- TM-5 The Kampo medicine joki-to (承氣湯) and the intestinal immune system /**
漢方薬と腸管での免疫—承氣湯との関係
Takao Namiki / 並木隆雄 (Chiba Univ. / 千葉大学, Japan)

TM-1

The study of the pathology of “Shitimotsukoubokutousyou (七物厚朴湯証)” /

七物厚朴湯証の病態考察

Yoshihiro Fukuta / 福田佳弘

Fukuta Orthopedic Clinic, Japan / 福田整形外科医院

I would like to introduce my opinion about the pathological analysis of the “Shitimotsukoubokutou” 「七物厚朴湯」 as quoted from “Kinkiyouryau 『金匱要略』 “. There are two theories advocated by precursors. The first one is connected to the exposure from outside elements such as the cold, while the other is attributed to mostly internal problems. In the former, the exterior syndrome called “Hyouyou” 「表証」 (“Keishitousyou” 「桂枝湯証」 or “Keishikyosyakuyakutousyou” 「桂枝去芍薬湯証」 in this case), appears at first, whereas the interior heat syndrome called “Rinetsusyou” 「裏熱証」 (“Koubokusanmotutousyou” 「厚朴三物湯証」) follows. Consequently the two different pathological states coexist and we need to treat both the exterior and the interior at once with the combination of the two medicines. In the latter, it is founded of the concept of “excessive yang and insufficient yin” 「陽実陰虚」. In my opinion, both theories apply to clinical cases according to the situation. I notice the discomfort chest fullness involving in “Keishikyosyakuyakutousyou” 「桂枝去芍薬湯証」 in the case of the former theory. Also, the eating and drinking habits are very important factor in the case of the internal problems theory according to the text words 「飲食如故」. I successfully treated a common cold, intestinal diseases such as ileus, abdominal fullness or constipation, psychological diseases and lumbago with “Shitimotsukoubokutou” 「七物厚朴湯」, some of these details I will present.

『金匱要略』腹満寒疝宿食病篇の七物厚朴湯による治験例を礎に、その病態を考察し病証について私見を述べる。本方に関する先人の解説は外感説と内傷説に分類される。前者は、外寒による表証（桂枝湯、あるいは桂枝去芍薬湯証）に続いて裏熱証（厚朴三物湯）が現れ二証の併存となる病態であり、治法は合方による表裏双解と説く。内傷説は陽実陰虚に基づくものである。演者は、合方と理解し、臨床では外感、内傷いずれの場合もあると考える。しかし内傷による“陰虚”には軽重の差あり、内熱には虚実の違いがあると考え。病証としては、条文にある“胸満”とともに、桂枝去芍薬湯条の“胸満”の伏在をも考慮すべきである。さらに“飲食如故”の“故”の字義は内熱の虚実を示唆している。演者の治験は、感冒に食傷を夾むもの、腹満・便秘、イレウスなどの胃腸疾患、呼吸器疾患、神経症、精神疾患、腰痛などの慢性の諸疾患に及ぶ。

TM-2

Tiao Wei Cheng Qi Tang (調胃承氣湯) for the treatment of Immune Thrombocytopenic Purpura (ITP) / 以調胃承氣湯治療原發性紫斑症

Chung Chen li / 鍾箴禮

Ching Shiang Chinese Medicine Clinic, Taiwan / 慶祥中医診所

Immune thrombocytopenic purpura (ITP), also known as autoimmune thrombocytopenic purpura, invades by viral infection and causes damages to platelet surface antigens.

There are ample descriptions of triple burner (三焦), construction qi (營) and defense qi (衛) written in Shang Han Za Bing Lun (傷寒雜病論), referring the physiological functions of triple burner (三焦), construction qi (營) and defense qi (衛), throughout the theme for applications to classical herbalism and Jing Fang (經方).

Zhang Zhong Jing (張仲景) is highly valued pulse examination, he divided cun kou pulse (寸口脈診) into three parts corresponding to diagnose disease patterns of triple burner (三焦).

According to Zhang Zhong Jing's three parts and six divisions pulse-taking theory, we obtain location of pulse of stomach. From the perspective of qi and blood transformations associated with middle energizer (中焦), and from the change of pulse, we can conclude that in the view of harmonizing the construction qi (營) and defense qi (衛) by properly adjustment the amount of Dahuang (大黃; Radix et Rhizoma Rhei) in Tiao Wei Cheng Qi Tang (調胃承氣湯) is a remarkable treatment for Immune Thrombocytopenic Purpura (ITP).

原發性紫斑症;屬於自體免疫性血小板減少性疾病,細菌病毒的感染導致血小板免疫性破壞是發病原因。

傷寒雜病論中記載了大量關於三焦與營衛病症的內容。

推知三焦與營衛的生理功能,貫穿整個經方運用的思想,仲景先生重視脈診,他將寸口脈診分為三部與三焦相對應以診候三焦的病證。

今以運用仲景先生三部六位診法,診得胃的脈位,自中焦化氣生血的角度,自脈象中的變化闡發以調胃承氣湯增減方中大黃劑量,調和營衛的治療觀點以治療原發性紫斑症。

TM-3

A secondary amenorrhea woman had led to get pregnant and safety delivery by a long-term(including 14 months before her pregnancy and the whole gestation period) continuous medication of Dai-Joki-to (大承氣湯) combined with Dai-Saiko-to 大柴胡湯) : We take the clinicopathologic difference between Dai-Joki-to and Dai-Saiko-to into consideration in order to discriminate their peculiarities by this effective case study and referring to Chinese medical classics to verify it. / 大承氣湯合大柴胡湯の長期（妊娠 14 ヶ月前から妊娠の全期間）投与による妊娠・出産に至った二次性無月経の一例～ 症例と古典より、大承氣湯と大柴胡湯の病態異同を検討～

Chiensho Lai / 賴建守

Kampo Medical Lai Clinic, Japan / 漢方医療 賴クリニック

A description in the Chapter “Discriminate Purgative-usable Diseases” of Shang Han Lun (傷寒論) said: “One suffering from abdominal distension with pain, so-called ‘Excess’. It should better give Dai-Saiko-to(大柴胡湯) or Dai-Joki-to(大承氣湯) medication to purge the bowels.” Besides this description, there are also another 5 descriptions written by the way of “.....should better give Dai-Saiko-to(大柴胡湯) or Dai-Joki-to(大承氣湯) medication.” in Shang Han Lun (傷寒論) . It indicates that both of them are similar but not the same in clinical application. This secondary amenorrhea patient was at first suffering from severe constipation, chill, epigastric discomfort, and abdominal distension with pain due to overeating and excessive drinking. The patient improved in constipation and chill immediately after being given Dai-Joki-to(大承氣湯), but abdominal distension with pain was just reduced to some extent(about50%), even though Dai-Joki-to(大承氣湯) worked invalid in epigastric discomfort. While being combined with Dai-Saiko-to(大柴胡湯), the patient was relived completely from abdominal distension with pain and epigastric discomfort. As a result, she had led to get pregnant and safety delivery by a long-term continuous medication combined with these two. With reference to the effective case study, the observation of abdominal patterns by meridian (經絡) and the whole course of treatment. In addition, we refer to Chinese medical classics to try to verify the clinicopathologic difference between Dai-Joki-to(大承氣湯) and Dai-Saiko-to(大柴胡湯) in order to discriminate their peculiarities.

傷寒論・辨可下病に「病腹中満痛者、此為實也、當下之、宜大柴胡、大承氣湯」の記載がある。それ以外にも「…宜大柴胡、大承氣湯」の条文はまた五条収載されているので、大承氣湯と大柴胡湯の臨床応用は「似て非なるところ」があると思われる。この二次性無月経の患者は過食・過飲によって当初ひどい便秘、冷えと心下の痞え、腹満痛に苦しんでいた。大承氣湯の投与にて便秘、冷えはすぐに改善した。しかし腹満痛はある程度の改善がみられても完全にとれず、また心下痞はとれなかった。大柴胡湯との兼用後、腹満痛が完全にとれ、また心下痞も消失した。両者の長期投与により、妊娠・出産に至った。この著効した症例の腹診所見と治療経過を参考した上に、また古典の記載を参照し、大承氣湯と大柴胡湯の病態異同を検証したいと試みる。

TM-4

Compare with the three types of Chenqi Tang (承氣湯) described in the “Shang Han Lun (傷寒論)” and clinic use, with Huanglian Tang (黃連湯) to treat colon cancer stage 4 / 由三承氣湯的古典條文分析比較與臨床運用，合黃連湯治療大腸癌末期病例

Hung Tsu Cheng / 鄭宏足

Life Care Classic Chinese Medicine / 傳愛經典中医診所

We compare with the three types of Chenqi Tang (承氣湯) described in the “Shang Han Lun (傷寒論)” and the “Ben Jing Shu Zheng (本經疏證)”, Da Chengqi Tang (大承氣湯) includes *Rheum rhabarbarum* (大黃), *Natri Sulfas* (芒硝), *Magnolia officinalis* (厚朴) and *Citrus aurantium* (枳實). Small Chengqi Tang (小承氣湯) includes *Rheum rhabarbarum* (大黃), *Magnolia officinalis* (厚朴) and *Citrus aurantium* (枳實). Tiao wei Chengqi Tang (調胃承氣湯) includes *Rheum rhabarbarum* (大黃), *Natri Sulfas* (芒硝) and *Glycyrrhiza uralensis* (甘草). We find the difference of each herb among the three types of Chenqi Tang (承氣湯), then we could realize the clinical usage of these herbs and three types of Chenqi Tang (承氣湯). As a result, we combine the three types of Chenqi Tang (承氣湯) and Huanglian Tang (黃連湯) to treat colon cancer metastasis. *Rheum rhabarbarum* (大黃), nature and flavor, bitter-cold, detach the heat attach the essence, spittle, stool, urine, snivel, tear, retained fluid, retained food and blood, made them recover its normal function. So we call “Chenqi (承氣)” that is receiving Qi. *Magnolia officinalis* (厚朴), nature and flavor, bitter-warm, it could warm up to transform cold damp to be normal fluid and then flow to the middle energizer (中焦), so it could expel stagnation. *Magnolia officinalis* (厚朴) could detach the Qi attach the middle energizer, otherwise, *Citrus aurantium* (枳實) could move the Qi suspend to the middle energizer (中焦). *Magnolia officinalis* (厚朴) could eliminate the distention and fullness; otherwise, *Citrus aurantium* (枳實) could eliminate the hardness and fullness. *Natri sulfas* (芒硝), nature and flavor, bitter-cold, it could change the osmotic pressure of intestinal mucous to make water redistribution which can could change the osmotic pressure of intestinal mucous to make water redistribution which can soften the stone stool, and could excrete water stool which can reduce internal heat.

藉由《傷寒論》的古典條文與《本經疏證》的論述，比較大承氣湯（大黃、芒硝、厚朴、枳實）、小承氣湯（大黃、厚朴、枳實），與調胃承氣湯（大黃、芒硝、炙甘草）的異同，分析諸藥物的角色發揮，探討三承氣湯臨床使用的鑑別，並實際運用於治療大腸癌末期的患者。大黃性味苦寒，去津液、精、唾、便、溺、涕、洩、留飲、宿食及血之火，恢復其應有的功能，故所以為承氣。厚朴苦溫，可溫化寒濕，直歸中土而散結氣；枳實苦寒，可直下洩滯。厚朴利氣之著於外，枳實利氣之懸於中；厚朴除脹滿，枳實除堅滿。芒硝苦寒，藉由改變腸胃道黏膜滲透性，津液重新分布，燥屎得以軟化，內熱可以藉由水分的排泄帶出體外。

TM-5

The Kampo medicine joki-to (承気湯) and the intestinal immune system /

漢方薬と腸管での免疫—承気湯との関係

Takao Namiki / 並木隆雄, Yoshiro Hirasaki / 平崎能郎

Department of Japanese-Oriental (Kampo) Medicine, Graduate School of Medicine, Chiba University / 千葉大学大学院医学研究院和漢診療学

The intestinal tract has long been regarded as an organ that merely absorbs nutrition and water from food, but it has gradually become clear that the intestinal tract is the largest immune organ in the body, and that the immunity provided by the intestinal tract's mucosa plays an important role in human immunity.

Although prescriptions of the Kampo herbal product which include both Rhum (大黃) and mirabilite (芒硝) joki-to are essentially prescriptions in the middle yang stage (陽明病), these should not be recognized as simple laxatives. We propose that joki-to are the decoctions that influence the immunity of the entire body by normalizing the conditions of immunity in the intestinal tract. It is thus necessary to understand joki-to from such a point of view.

Reference: Go Ito: Basic textbook for Kampo medicine (in Japanese), Gakken, Tokyo

これまでは腸は単に食物から栄養や水分を吸収するための臓器と考えられてきました。しかし、現在では、腸管は最大の免疫臓器であることが次第に明らかになってきました。つまり、免疫において腸管における粘膜免疫が重要な働きをすることがわかってきました。承気湯類は陽明病に用いる処方であるが、単なる下剤ではなく、腸管の状態を正常化することで、全身の免疫に影響する薬と推測されます。今後このような観点から承気湯類を考えることも必要でしょう。

参考：伊藤剛『東洋医学のきほん帳』

薬剤師向け漢方講座（日本語）

Lectures for the pharmacists in Okinawa (in Japanese)

(Sponsored by 日本漢方交流会 Japan Kanpo Society)

PL-1 Drug interactions among functional foods, crude drugs, kampo medicines and Western medicines

/ 生薬・漢方薬・機能性食品と医薬品の薬物相互作用について

Katsunori Nakamura / 中村克徳

(Univ. Ryukyu, Japan / 琉球大学附属病院薬剤部)

Chair: Toshiaki Makino (Nagoya City Univ., Japan)

/ 牧野利明（名古屋市大学院薬学研究科）

16:10 – 17:00 on April 16 (Sat.), Room A2

PL-2 The characteristics of Kampo granule prescription and medication counseling

/ 漢方エキス製剤の特徴を知り、服薬指導に生かす

Toshiaki Makino / 牧野利明

(Nagoya City Univ., Japan/ 名古屋市大学院薬学研究科)

Chair: Katsunori Nakamura (Univ. Ryukyu, Japan)

/ 中村克徳（琉球大学附属病院薬剤部）

17:00 – 17:50 on April 16 (Sat.), Room A2

PL-1

生薬・漢方薬・機能性食品と医薬品の薬物相互作用について / Drug interactions among functional foods, crude drugs, Kampo medicines and Western medicines

中村克徳 / Katsunori Nakamura

琉球大学医学部附属病院薬剤部, 日本 / Dept. Pharmacy, Univ. Ryukyu Hospital, Japan

背景. 生薬・漢方薬・機能性食品は、医療・健康増進に広く利用されています。最近では、できるだけ病院に行かずに病気を治すという考え方の普及や高齢の方々の増加に伴い、健康増進や健康維持を目指した、いわゆる健康食品ブームも起こっています。これに伴い、生薬・漢方薬や機能性食品が病院で処方される西洋薬と相互作用する場合があります。ことが知られています。

目的. 生薬・漢方薬は適切に使うと西洋薬で治療が難しかった症状にも効果を発揮する場合があります。また機能性食品など“食”を中心とした健康に対する関心の高まりは、予防医学の観点からも非常に重要です。しかし、何らかの西洋薬を飲んでいる場合には、その医薬品との相性（相互作用の可能性）について知っておくことが大切です。本講演では、生薬・漢方薬や機能性食品（健康食品やサプリメントを含む）と医薬品との相互作用の代表的な事例を紹介し、服薬指導の参考となることを目的としています。

考察. 近年の健康への関心の高まりから、健康食品やサプリメントを飲んでいる患者さんが多くなっています。健康食品やサプリメントは、医薬品を服用している患者さんであっても、患者さんの自己判断で摂取されている場合があります。薬剤師は、西洋薬間の相互作用のみならず、生薬・漢方薬・機能性食品と医薬品の相互作用にも注意を払う必要があると考えられます。

結論. 薬剤師は、生薬・漢方薬・機能性食品についても情報を収集し、患者さんに対して適切な相互作用等の情報提供をすることが必要です。

Traditional medicines (including Kampo medicines) and health supplements have been used to treat various ailments and promotions of good health. For some deconditioning, which are difficult to treat with western drugs, it is expected that traditional medicines and health supplements could play a special role in the medical treatment and the healing process. On the other hand, it has been reported that some traditional medicines and health supplements have potential interactions with many western drugs. In the circumstances, pharmacists can further improve the usefulness of traditional medicines and health supplements in medical treatment through the instruction of the knowledge of their pharmacological properties when used in combination with western drugs. In this lecture, some information will be presented on the typical interaction between traditional medicines and western drugs.

PL-2

漢方エキス製剤の特徴を知り、服薬指導に生かす / The characteristics of Kampo granule prescription and medication counseling

牧野利明 / Toshiaki Makino

名古屋市立大学大学咽薬学研究所生薬学分野, 日本 / Dept. Pharmacognosy, Grad. Sch. Pharm. Sci., Nagoya City University, Japan

漢方薬の本来の姿は、患者の症状に応じて複数の切断生薬を混合し、たいいてい場合は湯液として使用するものです。しかし、そのような剤形は、①調剤に時間と手間がかかる、②煎じる時にも時間と手間がかかる、③患者自らが煎じるので、その煎じ方に個人差があるため実際に服用する湯液の品質が安定せず、効果にも個人差が出てしまう、④携帯に不便、⑤保険診療では薬価が安すぎるために低品質の生薬しか使用できない、などのデメリットがあり、現在では湯液に含まれる水分を蒸散させて生薬から熱水に溶け出してきた成分のみを製剤化したエキス製剤という剤形が一般的になっています。

漢方エキス製剤は、湯液が持つ以上のようなデメリットを克服し、今日における漢方薬の普及と患者のアドヒアランスの向上に貢献していますが、湯液と比較したときのデメリットも少なくはありません。例えば、①保険診療においては使用できる処方が 148 種類に限られている、②医薬品としての適応に西洋医学における病名しか認められておらず、漢方医学的に使用する際には適応外使用されることがある、③メーカーによって適応や原料として使用する生薬の品質、処方構成する生薬の配合量が異なる、④処方の原典では散剤や丸剤としているのに、湯液(エキス)として調製されてしまう、⑤処方内容が固定されているため、患者ひとりひとりの症状に応じて配合されている生薬の加減ができない、⑥湯液に含まれる水を蒸散させる際に香りの成分も一緒に蒸散してしまうために、湯液と比較すると香りが弱い、⑦大手メーカーの製剤は形剤として乳糖を使用しているため乳糖不耐症の人では胃腸障害が起こりやすい、⑧すべて食前又は食間投与とされており、患者が飲み忘れを起こしやすい、などがあります。本講演では、そのような漢方エキス製剤の特徴と問題点について解説します。

The original form of Kampo medicines are usually the mixture of cut crude drugs, the patients use it as the decoction. However, this dosage form has several demerits: (1) pharmacists takes longer period and greater effort to prepare the prescription than in Western medicine; (2) patients also need longer period and greater effort to prepare the decoction; (3) the varieties of the quality among decoctions and the effectiveness of the decoctions are appeared because each patient prepares the decoction among in his/her way; (4) unconveniences to bring the decoction; (5) excessively lower prices of crude drugs in public health insurance, and it is necessary to use crude drugs with low quality. Therefore, we are usually using Kampo extract granule formulations that are prepared by decocting crude drugs, making water evaporate, and collecting the extract.

Kampo extract granule formulations overcome those demerits, and have contributed to the spread of Kampo medicine and the improvement of adherence to take the formulation in patients. However, there are still have demerits as follows: (1) it is limited to use only 148 Kampo formulas in public health insurances; (2) the efficacies of the formulation are described in Western medicine, and when physicians use it by the knowledge

of Kampo medicine, they sometimes use it with not applicable efficacies; (3) the efficacies, the qualities of source crude drugs, and the contents of each crude drug are different among the pharmaceutical companies; (4) the most of the formula are produced by decoction crude drugs though the original formulations had been described as powder or pill; (5) the content of the formula is fixed, and physicians can not modified depending on the patients' condition; (6) the smell of crude drugs is lower than the decoction; (7) lactose added as excipient sometimes causes lactose intolerance; (8) the formulation should took ante or inter cibos that easily cause missing dose.

Abstracts for Poster sessions

ODD poster numbers

from 17:00 - 17:30 on on April 16

EVEN poster numbers

from 17:30 – 18:00 on on April 16

P-1

The dispute and the dilemma of Chinese herb management in Taiwan

Po-Hsun Chen^{1,2}, Su-Tso Yang³, Hen-Hong Chang³

¹*Institute of Science, Technology and Society, National Yang Ming University, No.155, Sec. 2, Linong St., Beitou Dist., Taipei City, Taiwan, 886-11221, R.O.C.*

²*Chinese Medicine Department, Tainan Hospital, Ministry of Health and Welfare, No.125, Zhongshan Rd., Tainan City, Taiwan, 886-70043, R.O.C*

³*School of Chinese Medicine, China Medical University, No.91 Hsueh-Shih Road, Taichung, Taiwan, 886-40402, R.O.C.*

Background.

In Taiwan, due to the legal dispute of prescription right of Chinese herbs, the Chinese medicinal pharmaceutical personnel are in suspense. Also, only few consensuses of the Chinese herbs management have been reached.

Objectives.

From the concept of Science, Technology, and Society Studies (STS), we investigate the interaction of traditional Chinese medicine industry and modern pharmacy laws in Taiwan. Furthermore, we discuss the qualification and dispute of expertise in the processing of legislation.

Methods.

We use documentary analysis in the historical stream of Chinese herbal prescription in Taiwan, including the regulations of Chinese herbal prescription and the news reports of the prescription right dispute. Moreover, we use in-depth interview to collect the fieldwork data of traditional Chinese medicine dispensaries in Taiwan.

Results.

By analyzing the regulations of herbal prescription since Japanese-governing era in Taiwan, we find that the legal dispute of prescription right of Chinese herbs is based on the qualification of expertise, which is qualified by the modernization and bio-medicalization standards. However, the government ignores the herbs' duality character of agricultural product and pharmaceuticals, which plays important role in the management of traditional Chinese medicine dispensaries.

Discussion.

However, in the practicing of Chinese medicine dispensaries in Taiwan, the bio-medical view of legislation and management cannot deal with all the related issues about Chinese herbs completely, and also puts traditional knowledge and skill in crisis. There are some deficiencies of the present Pharmaceutical Affairs Act.

Conclusions.

In recent years, the legal dispute of prescription right of Chinese herbs indicates the management of Chinese herbs is in the dilemma of modernization and tradition in Taiwan.

P-2

To explore the usage of porridge from the Chinese classics of traditional and modern discourse

Mei-Tian Jou, Pei-Chi Chou and Mao-Feng Sun

Graduate Institute of Chinese Medicine, China Medical University, 91 Hsueh-Shih Rd., Taichung City, Taiwan R.O.C.

Background. Since ancient times, "porridge" is an important type of diet. With the progress of the times, porridge is no longer a symbol of poverty, have been given different purposes, but also to expand the scope of use, not only is the use in the elderly or patients. In addition, the common porridge "zhou 粥", if you add herbs it will have therapeutic efficacy, plus the general ingredients, such as fish, meat, vegetables, and so on, and become congee with modern nutrition concepts. However, the development of porridge in the modern era should be a new look.

Objectives. First, traditional porridge reclassified, and explain the dietary compatibility and incompatibility. Second, modern porridge do nutritional analysis, and artificial classification of symptoms, for clinical using.

Methods. The chapters in traditional classics for porridge associated with the original data were collected. In addition, modern papers related porridge relevant to compare to modern nutrition as a verification of the information. All materials were further collated and discussed.

Results. In this study, the theories of nutrition from the modern Western and Chinese medicine were collated. The theory of Yin-Yang and Five Elements in Chinese medicine, interrelationships between organs and body functions, and Five Flavors were interpreted. Two hundred types of porridge were tabulated and classified according to the four seasons and Chinese body constitution. In addition, 215 kinds of medicinal and edible Chinese medicines were tabulated based on the Food and Drug Administration, Department of Health, Taiwan.

Discussion. There goes the saying "Good medicine tastes bitter" among the people, because most of the decoctions of Chinese drugs are bitter. Some people, especially children, take an aversion to the bitterness of Chinese drugs and refuse to take them. Most of the drugs used in medicated diet are both edible and medicinal, and retain the properties of food: colour, sweet-smelling, flavor, and so on. Porridge is one kind of medicated die, which mixed with Chinese herbs and carefully cooking. So it can be said that medicated diet is good in taste and convenient for taking.

Conclusions. A detailed literature review and analysis of porridge, from the Chinese classics of traditional and modern discourse, were carried out. The results could be served as a reference for dietary compatibility and incompatibility as well as health preservation for the populace.

P-3

To explore the abdominal diagnosis from the “Zu Bing Yuan Hou Lung”

(General treatises on the causes and symptoms of diseases)

Li-Min Cheuh, Shu-Mei Zhou, Pei-Chi Chou and Mao-Feng Sun

Graduate Institute of Chinese Medicine, China Medical University, 91 Hsueh-Shih Rd., Taichung City, Taiwan R.O.C.

Background. Palpation is one of the Traditional Chinese Medicine diagnosis, in which was the process of examining pulse and abdomen. Influenced by the feudal ethics, most of the TCM doctors paid more attention to the pulse and tongue based examinations. With the progress of the times, less use in clinical make abdominal diagnosis to be neglect. "Zu Bing Yuan Hou Lung" (AD 610) is the earliest classic on etiology and symptomatology in China. It regardless of prescription, but emphasize traction, massage and qi. The book is not designed for abdominal diagnosis chapter discusses, but most of the symptoms are the use of it.

Objectives. Trying to explore the abdominal consultation principle, methods, area and application of abdominal diagnosis from the "Zu Bing Yuan Hou Lung" and reclassified for clinical using.

Methods. Based on the abdominal diagnosis is an unique skill of TCM clinical, a content analysis of abdominal diagnosis in the “Canon of Internal Medicine” and "Zu Bing Yuan Hou Lung" was conducted. In addition, recent abdomen-related medical literature on modern day was examined. All materials were further collated and discussed.

Results. In this study, the theories of abdominal diagnosis from the modern Western and Chinese medicine were collated. The theory of Yin-Yang and Five Elements in Chinese medicine, interrelationships between organs and body functions were interpreted. Seven types of factors were tabulated and classified according to the abdominal symptom and Chinese body constitution.

Discussion. The abdominal diagnosis described in "Zu Bing Yuan Hou Lung" is not just about palpation. In fact it includes four examinations: inspection, olfaction, inquiry and palpation. It benefits the clinical medicine and enriches determination of treatment based on differentiation of syndromes and broadens four examinations. Its formation is closely correlated with historic background of China. We study abdominal diagnosis and combine TCM in clinical practice in order to decrease misdiagnosis rate and serve people better.

Conclusions. A detailed literature review and analysis of "Zu Bing Yuan Hou Lung " were carried out. The results could be served as a reference guidance for the clinical diagnosis.

P-4

A study on sudatoriums for sweating treatment in Joseon dynasty, Korea

-Based on *the annals of the Joseon dynasty*-

Song Jichung¹, Eom Dongmyung²

¹*Dept. of Medical Classics & History, College of Korean Medicine, Daegu Haany University, Kyungbuk, Republic of Korea*

²*Dept. of Medical Classics, College of Korean Medicine, Wonkwang University, Jeonbuk, Republic of Korea*

Background. Sweating treatments which are mentioned in *Shanghanlun* (傷寒論) is one of the most popular and representative ways to cure someone's diseases.

Objectives. *The Annals of the Joseon Dynasty* have all the 28 kind records for 25 kings during 472 years in Joseon Dynasty. In the medicine-related record out of *The Annals of the Joseon Dynasty*, I could know that there was sudatorium, which was similar with sauna today and then it was used to cure diseases. So, I will research how sudatorium was installed, how it was operated and who used it.

Methods. I organize the articles related with sudatorium in *The Annals of the Joseon Dynasty* and look for installation, operation, utilization of sudatorium.

Results. Installation place - Through *Sejong chronicles* in *The Annals of the Joseon Dynasty*, I could find that sudatorium was installed in the outside of East Gate, South Gate and middle place in Seoul.

Way of operation - Primarily, patients prepared supplies in person which was needed when using it. It was ordinary for patients to prepare personally firewood to take sudatorium but sometimes liege who operate sudatorium addressed a memorial to the king for working funds from nation. **Persons of operation** - Most of people who operate sudatorium were Buddhist monk, and they were called 'sudatorium monk'. However, it occasionally happened to throw patients who did not need to sweat to cure their disease, so their diseases worsened or even they died because sudatorium monks were ignorant of medical knowledge. Accordingly, king ordered to transfer doctors from government offices of medicine (named Jeoneuigam, Hyeminguk, and Jesangwon) to each sudatorium.

Users - Most of sudatorium users were almost ordinary people. As many people used sudatorium, it was difficult to accept all of them because its scale was small. Therefore operating cost became higher. In the fact that there was ask for enlarge the scale and funds, I can find that many people used it frequently. Meanwhile, there is record that queen, former queen of royal court also used it.

Discussion & Conclusions. In traditional medical book, sweating treatments was referred as the way to sweat out by adding heat to body. However, it was much more usual to sweat by taking medicine[herbal medicine] than any others. In *The Annals of the Joseon Dynasty*, it recorded specific facts that nation installed and operated sudatorium which applied Sweating treatments to cure people's diseases, to give relief directly to the poor and to have royal family use it, too.

Bibliographic analysis of Ben Lou (Abnormal uterine bleeding) in encyclopedia of traditional Chinese medicine

Yi - Rong Lin^{1,2}, Su-Tso Yang^{1,2}

¹*Graduate Institute of Chinese Medicine, China Medical University, Taichung 40402, Taiwan, R.O.C.*

²*Department of Radiology, China Medical University Hospital, Taichung 40447, Taiwan, R.O.C.*

Background Ben Lou, abnormal uterine bleeding, is a common but complicated clinical presentation. Abnormal uterine bleeding includes any change in menstrual period, frequency or amount of flow, mostly means excessively heavy, prolonged or frequent bleeding. Heavy and abnormal uterine bleeding had deleterious effects on quality of life and health of women. The prevalence rate of abnormal uterine bleeding was 11-24 percent. Furthermore, it accounts for 25 percent of gynecologic surgeries.

Numerous ancient medical literature and clinical guides deserve to be treasured. Bibliography plays the role as a bridge between information and scholars. Discussing the characteristics of bibliographical information of Traditional Chinese Medicine (TCM) literature is important in organizing the ancient medical literature.

Objectives This study aims to search and analyze the ancient literature record of abnormal uterine bleeding in Encyclopedia of Traditional Chinese Medicine (ETCM, 中華醫典), an electronic database that contains a large number of TCM literature documents.

Methods Statistical analysis was used to manage the searching result of TCM documents in the 4th edition of ETCM. Comparison and categorization were conducted with the use of *Dictionary of Chinese medical books* (中國醫籍大辭典) to correct the records of author and writing era.

Results There were 131 items presented when the keyword "Ben Lou (崩漏)" was used in searching the content section (目錄區) of the 4th edition of ETCM. The 131 outcome data were compiled in 75 books.

Discussion The peak time of literature work predominated in Qing dynasty. The most productive authors were Zhu Dang-xi (朱丹溪) and Gong Ting-xian (龔廷賢). Documents contain most "Ben Lou" chapters were found in *Rules and Regulations of Obstetrics and Gynecology* (女科經綸), *Bamboo Grove Temple Gynecology* (竹林寺女科), and *Synopsis of Treating Women's Diseases* (濟陰綱目). The data of literature work were mostly distributed in the classification of Clinical Guide of Obstetrics and Gynecology (臨證各科-婦科類), Universally Clinical Guide (臨證綜合類), and Clinical Case Records (醫案醫話類).

Conclusions Encyclopedia of Traditional Chinese Medicine provides us vast amount of resources to research the ancient literature record of TCM. It is helpful in reviewing and organizing the ancient comprehension of pathology and treatment of abnormal uterine bleeding in the literature of traditional Chinese medicine.

P-6

The influence of the official medical educational policies on the development of Sphygmography during Ming and Ching dynasties

Hui-Mei Chen, Su-Tso Yang,

Graduate Institute of Chinese Medicine, 91 Hsueh-Shuh Rd Taichung, ROC

Background. Pulse taking has been one of very important means of diagnosis in traditional Chinese medicine. Its development has accompanied the Chinese medicine. Many studies focused on finding out its origin and skills of taking pulse, and discussed pulse shapes and its conditions and the thoughts of famous doctors. In ancient history, private doctors took the task of teaching pulse taking skills which they learned from unknown talented Masters. Later on, governments in different dynasties built medical systems. The official medical educational policies seemed to be more and more important. My study is interested in the influence of the official medical education policies on the development of Sphygmography, especially in Ming and Ching dynasties, when the printing technology developed well in China, any issued books spread quickly and the movements of philosophy, theorization of Chinese medicine and textual criticism continued.

Objectives. The study of the developing tendency of Sphygmography in Ming and Ching dynasties which was affected by the official medical educational policies would point out the importance of medical educational policies which play a big role to direct the orientation of developing Sphygmography.

Methods. From historical aspect to gather, compare and organize the related primary and secondary materials.

Results. 1 Numerous private doctors sensed their obligation to form a “real qualified” doctor group to be distinguished from other “unqualified” doctors by theories of Sphygmography. They insisted that only the real qualified doctors knew more real theories of pulse taking. Because that time there were no license systems, everyone could call himself as a doctor, if he learned some skills of pulse taking and knew some medicine.

2. Numerous doctors devoted themselves to theories of Sphygmography, especially to study classic medical books in the way of textual criticism.” Back to Neijing” was the slogan of that time, which was described as “Renaissance of Chinese medicine”.

3. The theories of Sphygmography of that time eliminated any mysterious factors.

Discussion. The influence of official medical educational policies in other dynasties are worth studying. The author of this report is still keeping researching it.

Conclusions. In Ming and Ching dynasties, doctors tended to reflect upon the theories of Sphygmography of classic books and tried to explained them, and thus they proved to be qualified doctors.

A review of the development of Eastern and Western breast cancer management methods from the 14th to 19th century

Chiu-Hui Chao^{1,2}, Shih-Chang Lee¹, Pei Qi Zhou¹, Guang-Wei Chen¹, Te-Mao Li¹

¹*Graduate Institute of Chinese Medicine, China Medical University, Taichung, Taiwan.*

²*Longhua Hospital Shanghai University of TCM, Shanghai, China.*

Abstract

The development of breast cancer treatments has taken very different trajectories due to theoretical differences between Eastern and Western medicine from the 14th to 19th century. Ancient Chinese doctors developed a comprehensive and unique theoretical system explaining the cause, pathomechanism, and treatment of breast cancer. Chinese surgery operates according to two principles known as “outer appearance from the inside” and “resolution of the surface must be treated from the inside”. Physicians try to understand the disease’s process combining the inner and outer system; Thus, treatment usually involves using oral medication (internal treatment) to eliminate pathogens and strengthen vital qi, along with external treatments, such as following: applying herbal ointment to help skin regeneration and healing, ironing with Chinese medicine pastes to eliminate tumors, and making small openings with heated needles to deliver medicinal strips containing extremely toxic arsenic for locally eroding the breast tumor, etc.

During the Edo period, a Japanese doctor, Dr. Seishu Hanaoka, was deeply influenced by ancient Chinese surgery studies, and developed an herbal anesthetic. In 1804, he performed the world’s first case of mastectomy under general anesthesia, eliminating the patient’s unbearable suffering during surgery. From the ancient Greek and Roman times to the Renaissance period, besides performing phlebotomy to release excess black bile based on Galen’s theory, Western surgeons, in the face of ulcerated breasts lesions, also advocated complete surgical excision of the affected region. Thus some surgeons branded the tumor lesion directly or performed what would be considered by today’s standards brutal mastectomy. From the end of the 19th to middle of the 20th century, due to the discovery of antiseptics and anesthetics, radical mastectomy became the mainstream breast cancer treatment. However this led to physical damage to the patient, which later caused the medical community to return to more localized and breast conserving surgical methods. This article reviews the history of Eastern and Western breast cancer management methods during the 14th to 19th century, in hope of providing new perspectives for today’s treatment for breast cancer.

P-8

Sohaku Asada and his student in newspaper in Meiji era

Takanori Matsuoka^{1,2}, Koichiro Tanaka², Tsukasa Fueki^{1,3}, Masashi Beppu⁴,
Kenshu Lai⁵, Takao Namiki⁶

¹*Department of Traditional Medicine, Toho University school of medicine, 5-21-16*

Omori Nishi, Ota-ku, Tokyo, 143-8540, Japan, ²*Public Interest Corporation Kenikai,*

5-3-8 Ginza, Chuo-ku, Tokyo 104-0061, Japan, ³*Matsuya Pharmacy, 2927-5 Maki-*

kou Nishikan-ku, Niigata, Niigata, 953-0041, Japan, ⁴*Center for Education Research in Medicine and*

Dentistry, Tokyo Medical and Dental University, 1-5-45 Yushima, Bunkyo-ku, Tokyo, 113- 8510, Japan,

⁵*Kampo Medical Lai Clinic, 2-13-5 Yoyogi Shibuya-ku, Tokyo 151-0053, Japan,* ⁶*Department of*

Japanese-Oriental (Kampo), Medicine, Graduate School of Medicine, Chiba University, 1-8-1 Inohana,

Chuo-ku, Chiba, Chiba, 260-8670, Japan

Background. Sohaku Asada (1815-1894) was a doctor who was born in Matsumoto city, Nagano prefecture. He lived in Edo and Meiji era.

Objectives. To know Souhaku ASADA's acts in Meiji era, we searched about articles of Yomiuri newspaper.

Methods. Yomiuri Newspaper article Data base "Yomidasu Rekishikan" was searched for Sohaku Asada from 1879 to 1899.

Results. There were 101 news's articles and 47 advertisements in Meiji era on the search word of "Sohaku Asada". Morning newspaper in 9th Oct. 1880 said "The students on Asada School are immoral students. They rave about in the 2nd floor of a public bathhouse and small restaurant. They are often bullish and bossy. And they say "Do you know us? We are the students of Asada." The neighbors of Asada School are afraid of them as mad dogs. They behave haughtily. When they get excuses, they say "Go to consult another doctor." Morning newspaper in 10th Oct. 1880 said "We are not immoral students. We must protect the master honor." They decided to change their attitude. Morning newspaper in 19th Jan. 1882 said "There were 3109 patients from 1st Oct. to 31th Dec. in 1881. But, only 1075 patients can pay money. Remain 1934 patients cannot pay money." A pharmacist said to Dr. Asada "This system accelerated the decline of that hospital. So, Shall we stop the home visit for clinical round." But Sohaku Asada said "Royal family pays much money. So it is no problem." Morning newspaper in 23th Apr. 1882 said "Many pharmacists send much drug to Asada's Hospital." Asada said in advertisement "There is much drug. I will hope to save many patients in this year."

Discussion. Many patients consult to Asada's hospital. But in Meiji era, there was no medical insurance like modern system. Asada's hospital was poor business performance, because Asada did not get money from poor patients.

Conclusions. In Edo era, Sohaku Asada could get many help by Newspaper. Medical insurance system did not make enough in Meiji era. So many patients could not pay money to consult. This situation caused to perform poor business.

A Study of the norms of traditional Chinese medicine since late Qing dynasty (1840-1949)

Hsuan-Ching Tseng¹, Jaung-Geng Lin¹, Dennis C. H. Cheng², Mao-Feng Sun¹,

¹*Graduate Institute of Chinese Medicine, China Medical University, 91 Hsueh-Shih Rd., Taichung City 40402, Taiwan*

²*Dept. of Literature and Cultural Studies, Hong Kong Institute of Education, 10 Lo Ping Road, Tai Po, New Territories, Hong Kong*

Background. Under the impact of Western medicine in the late-Qing dynasty, Traditional Chinese Medicine (TCM) had faced not only the questioning in theory and clinic treatment, but also the severe challenges in medical norms. Western medicine even intended to drive TCM practitioners out of so called the group of ‘doctor’ by means of medical laws. It was evident that changes of norm influenced TCM were more direct and realistic.

Objectives. This article attempts to analyze the challenges confronted in medical ethics or in medical laws to TCM from the angle of TCM practitioners during the period from the late Qing to the Republican era prior to the move to Taiwan (1840-1949). It also tries to understand the conflicts, changes and influence of medical norms between TCM and Western medicine.

Methods. Use of literature research methods, first by analyzing the difficult situation of norms of moral ethics and laws, TCM has faced; and next by finding the methods that TCM practitioners applied to solve the problems of norms of moral ethics and laws.

Results. Since late Qing dynasty, TCM has confronted the problem caused mainly by the different quality of inferior physicians. TCM practitioners have worked hard to try to establish norm of medical ethics to promote the image of TCM. In 1929 the western medicine submitted “The case of Abolishment of TCM” to try to abolish TCM by the law. TCM practitioners realized the importance of the law. TCM practitioners thus united to resist Western medicine and set up “Chinese medicine ordinance” to obtain the legal position and to protect the continuation of the development of TCM.

Discussion. After the Western medicine entered China, it not only brought in medical knowledge, but also the systems related, such as the systems of hospital, public health etc. Therefore, TCM practitioners at that time had faced not only the difference of medical knowledge from Western medicine, also the conflict of different norms at the two sides.

Conclusions. Since late Qing dynasty, our government neglected the original characteristics of TCM, and forced to put TCM in the norms and frame of Western medicine. This policy hindered the development of academy, education and clinic practice of TCM. The influence remains considerably today. It is hoped that our government from now on will set up medical laws according to the unique characteristics of TCM to support and ensure the continued development of TCM.

Chi-Fang Chen¹, Mao-Feng Sun^{1,2}

¹*Graduate Institute of Chinese Medicine, China Medical University, Taichung, Taiwan*

²*Department of Chinese Medicine, China Medical University Hospital, Taichung, Taiwan*

Background: The careful study of ancient Chinese medical literature can be a useful source of information in clinical practice. The TCM literature can be seen as part of a textual tradition which guides clinical practice, while other excavated archaeological texts have no relevance, and therefore can be relegated to archival literature in museums. Researching the literature of the Meridians (Channels and Network Vessels, 經絡) described in the acupunctural literature has been a difficult issue throughout history, but why are researchers unable to discover the physical Meridians by the use of anatomy? Why is it that internal diseases can be projected on to the surface of the body along the Meridians, and acupoints? There are only eleven words about description of Five Elements (五行) in Huang-De-Nei-Jing Ling-Shu (Spiritual Pivot, 靈樞). Is there really the Five Elements Theory in acupuncture? These questions lead us to reconsider the TCM literature.

Objectives: To find out the truly meaning of Meridians & Five Elements in acupunctural TCM literature.

Methods: 1. Using archival research. 2. Using critical and comprehensive research review which incorporates comparative textual analysis of ancient Chinese medical literature, with the combination of the researchers' clinical experiences in the practice of acupuncture.

Results: By researching archival of TCM literature and excavated texts (such as Ma-Wang-Dui silk texts, Zhang-Jia-Shan Han bamboo slips, various editions of Ling-Shu, Huang-Di-Nei-Jing Tai-Su Ninna-Ji edition etc.), we find that the Meridian is only a schema, and there is no Five Elements Theory related to acupunctural theory.

Discussion: The Meridians described in Nei-Jing is a schematic representation which the sensations of the stimulation of the acupoints are transmitted via a linear representation. At first, eleven pulse ports of wrist and ankle corresponded to the disease; then people combined the stone massage sensation and imposed a variety of Acupuncture-Sensation (針感) to a linear representation to simplify the presentation. In ancient times, the eleven channels except "shoulder channels" are directed toward the heart, ten channels are united to the heart. In order to meet the Five Elements Theory of Yin-Yang Relationship between the pair, Hand-Reverting-Yin-Meridian is added to the eleven channels hereafter the concept of Twelve Meridians emerges. Besides, the eleven words "金" & "木" in Ling-Shu chapter 2 <本輸篇> are now clearly distinguishes the original book from its commentaries by our research.

Conclusions: Cycle diagram from Twelve Meridians is false. Meridian is derived from schema of sensation and speculation, cannot be found by anatomy. There is no Five-Element in acupuncture.

The Implication of NUMBER in Shanghan Lun—Take the Hetu (河圖) and Five phases for example.

Shu-Yun Huang¹, Hsiao-Ling Tsou¹, Chin-Ming Wang²

¹*Chinese Medicine department of Chi Mei Medical Center, No.901, Zhonghua Rd., Yongkang Dist., Tainan City 710, Taiwan (R.O.C.)*

²*Catholic Sheng Kung Girls' High School, No.64, Ln. 87, Peiyang St., North Dist., Tainan City 704, Taiwan (R.O.C.)*

Background. “Shanghan Lun” (傷寒論) is believed the oldest complete clinical textbooks of Chinese medicine written by Zhang Zhongjing. Understanding the meaning and realize the usage of the prescriptions are still very important in recent time.

Objectives. The main meaning of this text is trying to investigate the theory that in the Shanghan Lun using NUMBER to construct the prescription, and making a cross-check with the Hetu and Chinese medical theory. To explain the importance and practicability of “NUMBER” use in Shanghan Lun.

Methods. Shanghan Lun assimilates the basic physiology in “Yellow Emperor’s Inner Classic” (黃帝內經). And the system of the Yellow Emperor’s Inner Classic is based on “the book of changes” (易經). Hetu was the original model of the book of changes, which contains lots of different phenomenon that observed in the natural, and use the NUMBER as a representation. Therefore, we take the NUMBER in the Hetu to investigate “the dose of the herb” and “the number of herbs in prescription” in Shanghan Lun.

Results. The Hetu can explain the physiology of Five Visceral in Chinese medicine. The prescription naming as number and the Four Phenomenon has a cross-link with Hetu. Shanghan Lun uses the NUMBER theory that based from the Hetu and Five phases, and it can be the guide in the modern Chinese medical theory.

Discussion. The Five Phases of the Hetu (east, west, south, north and mid) is corresponding to the Five Visceral of Chinese medicine, and also explain how “chi” working in human body. The prescription

which has the number “5” or “10”, Wulingsan and ten jujube decoction, pays attention to protect the spleen. Furthermore, the Four Phenomenon (四象) in the Hetu (Dragon, White Tiger, Zhuque, Xuanwu) also have corresponding prescription in Shanghan Lun. For example, Xiaoqinglong Decoction, the east prescription, use number “3” as the weight of the herb and number “8” as the number of herbs in the prescription. The other three have the similar phenomenon, which will be discussed in this article.

Conclusions. This article takes the Four Phenomenon and Five Phases in the Hetu and “Shanghan Lun” as example to explain the mystery of Chinese medicine. There is an ancient words, “If you never learn about the Book of Changes, you won’t be a great doctor.” and the Book of Changes is based on the Hetu, so it makes sense that the Hetu has the clinical significance.

Studies on processed licorice (1) – Herbological and analytical studies of roasted licorice (炙甘草) and honey-roasted licorice (蜜炙甘草)

Misato Ota^{1,2}, Masayuki Mikage³, Toshiaki Makino², Shao-Qing Cai¹

¹Dept. Pharmacognosy, Sch. Pharm. Sci., Peking Univ. Health Sci. Ctr., Beijing, China. ²Dept. Pharmacognosy, Grad. Sch. Pharm. Sci., Nagoya City Univ., Nagoya, Japan. ³Dept. Human Animal-Plant Relat., Fac. Agri., Tokyo Univ. Agri., Atsugi, Kanagawa, Japan.

Background. In the ancient traditional Chinese medicine (TCM), licorice has been used as two medicinal forms including dried one (甘草) and roasted one (炙甘草) as the situation demands. However, in the present TCM, honey-roasted one (蜜炙甘草) is also used. The appearance of honey-roasting for licorice in the history and the aims of these processing have not been well-revealed.

Objectives. We first elucidated the efficacies of three forms of licorice in medicinal literatures from ancient times and compared the description. Then, we analyzed the change of chemical compositions within licorice before and after processing to support the herbological evaluation.

Methods. Herbological study: We researched ancient medicinal literatures. Analytical study: We first prepared processed licorice from the root of wild *Glycyrrhiza uralensis*, which was heated at 120°C for 2 hr, 150°C for 1 hr, or 180°C for 30 min with or without pre-treatment with honey. Then, the difference of chemical compositions were analyzed by LC-IT-TOF/MS analysis with PCA, and TLC method.

Results and Discussion. Herbological study 1): We found that the main objective of roasting was to change the property of licorice from cool to warm, and that roasted licorice was used as an *energy supplement*, promoting digestion, and thus warming the body. Physicians had begun using honey-roasted licorice to treat throat pain from the Song dynasty, and then, honey-roasted licorice was expected to have the same effects of roasted licorice at the end of the Qing dynasty. Analytical study: It was shown that the contents of 41 peaks were changed significantly by processing. Among them, heated licorice contained higher amount of 5 kinds of glycosides, glucoisoliquiritin, isoliquiritin, isoliquiritigenin, glycyrrhetic acid 3-O-glucuronide, and 3 compounds which molecular weight was 592, 460, and 386. Honey-roasted licorice contained higher amount of saccharides derived from heated honey. We found that the content of some compounds were increased heating, suggesting that those compounds may contribute to being as *energy supplement* and to promoting digestion in licorice. The compounds derived from heated honey might also contribute to the processing of honey-roasting.

Conclusions. We found that honey-roasted licorice had been used as a substitute of roasted licorice. Although there is little difference of medicinal effects between those two processed licorice, the heated honey might be enhanced those effects by the processing of honey-roasting.

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Studies on processed licorice (2) - Comparison of the immunostimulatory effects among licorice (甘草) samples with or without heat-processing and pre-treatment with honey in cultured intestinal epithelial cells

Yasutaka Nagachi¹, Misato Ota^{1, 2}, Yoshiaki Tabuchi³, Shao-Qing Cai², Toshiaki Makino¹

¹Dept. Pharmacognosy, Grad. Sch. Pharm. Sci., Nagoya City Univ., Nagoya, Japan.

²Dept. Pharmacognosy, Sch. Pharm. Sci., Peking Univ. Health Sci. Ctr., Beijing, China. ³Div. Mol. Genet. Res., Life Sci. Res. Ctr., Univ. Toyama, Toyama, Japan.

Background. Previously, we found that roasted licorice (炙甘草) was used as an *energy supplement*, having a digestive effect from ancient times. Moreover, at the end of the Qing dynasty, honey-roasted licorice (蜜炙甘草), the roasted licorice with pre-treatment with honey, was used as the substitute of roasted licorice¹). However, there are few scientific evidences about the difference of the pharmacological activities among processed licorice with or without pre-treatment with honey.

Objectives. The effect of *energy supplement* in traditional medicinal theory may be translated as the promotion of the immune responses in intestine. Therefore, we evaluated the difference of inducible activity among processed licorice on cytokine X secretion from cultured murine intestinal epithelial cells (MCE301) to find scientific evidences in the processing of licorice.

Methods. We prepared processed licorice, which was heated at 120°C for 2 hr, 150°C for 1 hr, or 180°C for 30 min, with or without pre-treatment with honey. MCE301 cells were incubated with the media containing the hot water extract of licorice samples for 24 hr, and then the media were collected. The concentration of cytokine X in the media was estimated by the ELISA method.

Results. Licorice extract induced cytokine X production from MCE301 cells. Although the extracts of roasted licorice had almost the similar activity with the extract of unprocessed one, the extract of honey-roasted licorice which had been heated at 180°C for 30 min had significantly higher inducible effect of cytokine X secretion from the cells compared with those of unprocessed or roasted licorice.

Discussion. Cytokine X is known to have immune promoter, and is used to prevent the side effects of cancer chemotherapy in modern medicine. It is suggested that the heat-processing with honey would enhance the immunostimulatory activity of licorice, and the active compounds containing in honey would appear by heating.

Conclusions. We revealed that the *energy supplement* effect of honey-roasted licorice is higher than roasted licorice or unprocessed licorice. The present results would be able to explain one of the scientific evidences for the processing method using heating with honey in Qing dynasty.

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P-14 Ameliorating effects *Amomum cadamomum* Linné of on TNF- α -induced adipocyte dysfunction

Kyung-Hwa Kang*, Sang-Ho Lee, Yong Tae Lee

*Department of Physiology, College of Korean Medicine, Dongeui University,
Busan 614-052, Republic of Korea*

Background. Obesity is an increasingly common problems worldwide, and associated with an increased risk of developing insulin resistance and type 2 diabetes. In obese individuals, adipocyte dysfunction induces increased amounts of non-esterified fatty acids, hormones, pro-inflammatory cytokines and other factors that are involved in the development of insulinresistance.

Objectives. The present study was designed to investigate effects and molecular mechanisms of *Amomum cadamomum* Linné extracts (ACL) on the amelioration of TNF- α -induced adipocyte dysfunction. We examined whether ACL could influence the inflammation and insulin resistance in 3T3- L1 adipocytes.

Methods. Potential roles of ACL in the production of inflammatory cytokines and ROS, and the molecules and genes related to insulin signaling pathways were investigated in this study.

Results. ACL inhibited the release of proinflammatory cytokines and ROS. In insulin signaling pathways, ACL down-regulated the phosphorylation of ERK, JNK, and I κ B α protein and up-regulated the expression of PPAR γ on TNF- α -induced inflammation and insulin resistance. Whiles, ACL increased the expression of GLUT4 and IRS-1 mRNA related to the improvement of glucose uptake.

Discussion. Our data showed that TNF- α significantly increased levels of inflammatory cytokines and ROS and phosphorylation of ERK, JNK, and I κ B α protein, while TNF- α reduced the expression of PPAR γ in adipocytes. Those alterations induced by TNF- α were prevented by the treatment of ACL. We demonstrated that ACL improved TNF- α induced a condition with the occurrence of inflammation, insulin resistance, and glucose uptake.

Conclusions. Our results suggest that ACL can be used to prevent from the TNF- α -induced adipocyte dysfunction through MAPK, NF κ B and PPAR γ pathways.

P-15

Significant inhibition of leukemia WEHI-3 cells growth by arsenic trioxide and extract of *Hedyotis diffusa* Willd *in vitro* and *in vivo*

白花蛇舌草萃取物併用三氧化二砷對血癌細胞(WEHI-3)在體外和活體顯著抑制活性
Yu-Jui Kuo^{1,2}, Yan-Jin Liu³, Tzong-Der Way^{4,5}, Su-Yin Chiang¹, Jaung-Geng Lin¹,
Jing-Gung Chung^{4,6}

¹Graduate Institute of Chinese Medicine, China Medical University, Taichung, Taiwan, R.O.C.; ²Department of Traditional Chinese Medicine, Tainan Municipal Hospital, Tainan, Taiwan, R.O.C.; ³Graduate Institute of Pharmaceutical Chemistry, College of Pharmacy, China Medical University, Taichung, Taiwan; ⁴Department of Biological Science and Technology, College of Biopharmaceutical and Food Sciences, China Medical University, Taichung, Taiwan; ⁵Department of Health and Nutrition Biotechnology, College of Health Science, Asia University, Taichung, Taiwan; ⁶Department of Biotechnology, Asia University, Taichung, Taiwan, R.O.C

Background.

Arsenic trioxide (ATO) is used clinically to treat leukemia, however, the therapeutic dose of Arsenic trioxide ATO could prompt critical cardiac side effects. To improve the therapeutic efficiency, combination therapy is a frequently used strategy in the clinics. In this study, we determined the combined effects of *Hedyotis diffusa* Willd (HDW) extract and ATO in leukemia WEHI-3 cells.

Objectives.

We test whether combining HDW with ATO would be a novel strategy for promoting the clinical efficacy of ATO in APL.

Methods.

1. Preparation of HDW. 2. Cell viability assay. 3. Establishment of leukemic mice and treatment with indicated drugs. 4. Spleen and liver tissues analysis. 5. Western blot analysis.

Results.

That the combination of HDW with ATO may be a promising strategy to increase the clinical efficacy of ATO in the treatment of APL.

Discussion.

That HDW significant with ATO to promote cell apoptosis by regulating different apoptotic molecules, and inhibition of Bcl-2 antiapoptotic members in WEHI-3 cells.

Conclusions.

HDW potentiated ATO-induced apoptosis in WEHI-3 cells. HDW and ATO coordinately initiated both the mitochondrial and death receptor apoptotic signaling pathways to trigger cell apoptosis in WEHI-3 cells.

Anti- α -glucosidase and anti-dipeptidyl peptidase-IV activities of extracts and purified compounds from *Vitis thunbergii* var. *taiwaniana*

Yin-Shiou Lin¹, Chi-Luan Wen², Chi-I Chang³, and Wen-Chi Hou¹,

¹*Graduate Institute of Pharmacognosy, Taipei Medical University, Taipei, Taiwan*

²*Taiwan Seed Improvement and Propagation Station, Council of Agriculture, Taichung, Taiwan*

³*Department of Biological Science and Technology, National Pingtung University of Science and Technology, Pingtung, Taiwan*

Background. The small-leaf grape (*Vitis thunbergii* var. *taiwaniana*, VTT) has long been used for the treatment of hepatitis, jaundice, diarrhea, and arthritis. The ethanolic extract of VTT has exhibited less lipid accumulation through regulation of the AMPK-ACC pathway in hypercholesterolemic rabbits.

Objectives. The purpose of this study was to investigate whether VTT could decrease lipid levels to improve glucose tolerances in diet-induced obese rats.

Methods. Ethanol extracts (Et) and hot-water extracts (Hw) from the stem (S) and leaf (L) of VTT and their Et partitioned fractions, including ethyl acetate fraction (Et-EA), butanol fraction (Et-BuOH), and water fraction (Et-w), were used to investigate yeast α -glucosidase and porcine DPP-IV inhibitory activities. Later, VTT-S-Et and VTT-L-Et (20 and 50 mg/kg) were used daily concurrently with the high-fat diet from day 36 to day 68 and were then used to investigate improvements of the impaired glucose tolerances in obese Wistar rat. The isolated compounds from S-Et-EA were tested for yeast α -glucosidase and porcine DPP-IV inhibitory activities and related kinetic properties.

Results. Both VTT-Et showed complete α -glucosidase inhibition at 0.1 mg/mL; VTT-S-Et and VTT-L-Et showed 26 and 11% DPP-IV inhibition, respectively, at 0.5 mg/mL. The VTT-Et interventions (20 and 50 mg/kg) resulted in improvements in impaired glucose tolerance of diet-induced obese rats. (+)-Hopeaphenol, (+)-vitisin A, and (–)-vitisin B were isolated from the ethyl acetate fractions of S-Et and showed yeast α -glucosidase inhibition (IC_{50} = 18.30, 1.22, and 1.02 μ M) and porcine kidney DPP-IV inhibition (IC_{50} = 401, 90.75, and 15.3 μ M) compared to acarbose (6.39 mM) and sitagliptin (47.35 nM), respectively. Both (+)-vitisin A and (–)-vitisin B showed mixed noncompetitive inhibition against yeast α -glucosidase and porcine kidney DPP-IV, respectively.

Discussion. These results suggested that VTT ethanol extract or vitisin A might reduce serum lipid levels and inhibition against preadipocyte differentiations to suppress the development of obesity.

Conclusions. In conclusion, on the basis of the observed biological functions of the current results, the development of VTT extracts as functional foods may be beneficial for blood glucose regulation and diabetic management.

P-17

Hypoglycemic effects of ethanol extracts of *Cajanus cajan* (L.) Millsp. roots in rats

Yen-Fong Lin¹, Jhen-Yi Chen², Chien-Lin Chen¹, Tuzz-Ying Song¹

¹Department of Bioindustry Technology, Dayeh University, Changhua, Taiwan

²Taitung District Agricultural Research and Extension Station, Council of Agriculture, Executive Yuan

Background. *Cajanus cajan* (L.) Millsp. root cooked with the ribs can cure diabetes is recognized an aboriginal traditional therapies. Previous studies known after a series of separation and purification from ethanol extract of *Cajanus cajan* root was obtained Betulinic acid, biochanin A, 5,2'-dihydroxy-7,4'-dimethoxyisoflavanone (cajanol), genistein, 2'-hydroxygenistein and other differences flavonoids. Many studies have confirmed the above components such as: genistein has excellent antioxidant capacity and the ability to inhibit the decomposition of carbohydrates.

Objectives . We investigated whether ethanol extracts of *Cajanus cajan* roots (EECR) could protect against methylglyoxal (MGO; 500 mg/kg bw)-induced insulin resistance (IR) in male Wistar rats between days 1 to 83.

Methods. Rats treated with MGO were used to examine the hypoglycemic effects of EECR on IR. The rats were divided into six groups and orally supplemented with MGO except for group 1 (normal controls). Group 3 was orally supplemented with Metformin (MET;10 mg/kg bw), group 4 with EECR-L (10 mg/kg bw), group 5 with HIP EECR-M (50 mg/kg bw), and group 6 with EECR-H (100 mg/kg bw). MET and EECR were provided daily between days 31 to 83 in rats. Oral glucose tolerance (OGTT) and insulin tolerance (ITT) tests in 6 groups rats were evaluated every 2 weeks.

Results. The results indicated that body weights, water and food intake for each group revealed no significant difference. In insulin tolerance tests (ITT), serum glucose levels of MGO-treated group was slightly change (approximately 100 mg/ml) (no insulin sensitivity) after intraperitoneal injection of insulin, while serum glucose level was significantly decreased ($P < 0.05$) in EECR-treated rats, the effects were comparable MET groups (MET is a known hypoglycemic drugs). Blood sugar and glycosylated hemoglobin as well as serum insulin, glycation end products (AGEs) of MGO-treated groups were higher than that of blank groups. EECR significantly decreased hyperglycemic index induced by MGO. In addition, EECR also dose dependently decreased serum biochemical index (such as, GOT, GPT, LDL, BUN, CHOL, TG), TBARS content and increased SOD activity.

Discussion. MGO can induce IR (increase the insulin and blood sugar level) in rats, whereas EECR could inhibit AGEs formation by reducing oxidative stress, so as to improve IR and lowering blood sugar.

Conclusions. EECR has the potential to become a useful hypoglycemic agent for diabetic mellitus.

Salvianolic acid B from Danshen (*Radix Salviae Miltiorrhizae*) via ARHGAP22 for modulating diabetic retinopathy progression

Yu-Chuen Huang^{1,2}, Jane-Ming Lin^{1,2}, Po-Chi Hsu², Shih-Yin Chen^{1,2}, Shih-Ping Liu^{1,2}, Yeh-Han Wang³, Huan-Ting Liu^{1,2}, Yu-Jie Lei^{1,2}, Hui-Ju Lin^{1,2}, Fuu-Jen Tsai^{1,2}

¹*China Medical University Hospital, No. 2, Yuh-Der Rd., Taichung City 404, Taiwan*

²*China Medical University, No. 91, Hsueh-Shih Rd., Taichung City 404, Taiwan*

³*Keelung Hospital, Ministry of Health and Welfare, No. 268, Xin 2nd Rd., Keelung City 201, Taiwan*

Background: Diabetic retinopathy (DR) is a common microvascular complication of diabetes. ARHGAP22 is downregulated in human retinal endothelial cells (HRECs) under high glucose conditions and is decreased in T2D mice with DR at 42 weeks of age. Thus, ARHGAP22 may play an important role in the development of DR.

Objectives: Danshen is a natural product that has widely been used for centuries to treat DR. We wished to determine whether compounds from Danshen affect ARHGAP22 expression. We used T2D mice to evaluate the efficacy of compounds from Danshen in preventing or slowing the progression of DR.

Methods: ARHGAP22 expression levels in HRECs under different glucose concentrations and in T2D mice (+Lepr^{db}/+Lepr^{db} strain) at 6, 16, 24, and 32 weeks of age were evaluated by western blotting. T2D mice treated with compounds from Danshen were used to evaluate the efficacy of protection against the development of DR at 16, 24, and 32 weeks. Mouse eye tissue samples were embedded in paraffin and stained with hematoxylin and eosin for the evaluation of retinal histopathology.

Results: Several compounds from Danshen were selected to study its effects on the expression of ARHGAP22 in HRECs cultured under different glucose concentrations. One active compound, salvianolic acid B (Sal B), facilitated the increase in ARHGAP22 expression under high glucose conditions in HRECs. In mouse retinal histopathology, no significant retinal changes were observed in T2D mice or control mice at 6 weeks. Two of three T2D mice treated with phosphate-buffered saline showed changes in their retinal vessels at 24 weeks. However, no lesions were observed in retinas from T2D mice treated with Sal B ($n = 3$) or control mice ($n = 3$) at 24 weeks.

Discussion: We will continue to investigate whether treatment with Sal B has protective effects in the development of DR at 32 and 48 weeks of age. We also wish to determine the pharmacological mechanism of Sal B from Danshen via ARHGAP22 in modulating DR development.

Conclusions: Sal B from Danshen may prevent or slow the progression of DR.

P-19 β -cell regeneration in STZ DM rats as an alternate anti-hyperglycemic mechanism of *Psidium guajava* L. extract

Shu-Ming Huang¹, Show-Wen Tsai², Chiu-Lan Hsieh^{3,*}, Miao-Lin, Hu^{4*}

¹Department of Food & Beverage management, Fortune Institute of Technology, Taiwan, R.O.C.; ²Department of Nutrition, Nantou Hospital, Ministry of Health and Welfare Nantou, Taiwan R.O.C.; ³Professor, Institute of biotechnology, National Changhua University of Education, Taiwan, R.O.C.; ⁴Agricultural Biotechnology Center, National Chung Hsing University, Taichung, Taiwan, R.O.C

Background. Diabetes mellitus (DM) is one of the major diseases that human being eagerly wants to overcome. In 2014, DM was the fourth of top ten causes of death in the Taiwan.

Objectives. The aim of this study was to determine the probable mechanism of action of The aqueous extract of *Psidium guajava* L. budding leaves (PE) on streptozotocin-induced diabetic mice.

Methods. The aqueous extract of *Psidium guajava* L. budding leaves (PE) were tested on streptozotocin (STZ)-induced diabetic Sprague-Dawley (SD) rats. Rats (mimic DM blood sugar level > 230 mg/dL) were orally administered 100, 300, 1000 mg PE/kg body weight, respectively.

Results. PE decreased plasma sugar but increased insulin levels in a dose-dependent manner. Amylase level was significantly elevated by PE 1000 mg/kgbw ($p < 0.05$). IHC stains showed that pancreatic islets and function of β -cells were partially restored by PE treatment.

Discussion. Results indicate that PE may alternatively act as an anti-hyperglycemic agent regeneration of β -cell in STZ-induced DM rats.

Conclusions. The data obtained from the present study indicates that the PE may have beneficial effects as both hypoglycemic and anti-hyperglycemic agents. Considering all these facts, it is reasonable to undertake further studies on possible usefulness of PE in the treatment of diabetes mellitus.

P-20 Effect of resveratrol oligomers on anti-glycation, monoamine oxidase b inhibitory activities, and protection against methylglyoxal-induced SH-SY5Y cytotoxicity

Yi-Shan Lee and Wen-Chi Hou

Graduate Institute of Pharmacognosy, Taipei Medical University, Taipei, Taiwan

Background. Protein glycation is one of important sources of ROS productions which have been implicated as a major pathogenic process. Resveratrol (trans-3, 5, 4'-trihydroxystilbene) has been reported as a multitargeted agent against age-associated chronic diseases, such as diabetes, and Alzheimer, and cardiovascular diseases. Notability, resveratrol oligomers were observed to inhibit acetylcholinesterase activities and protect against β -amyloid-induced oxidative stress in PC12 cells.

Objectives. The purpose of this study was to investigate whether the same molecular weight of resveratrol oligomers GJ2, GJ3, GJ10 could inhibit protein glycation and protect neuron cell against oxidative stress via methylglyoxal (MGO)-induced cell injury. In addition, these compounds were also to evaluate the MAO-B inhibitory activity.

Methods. BSA/MGO was used as models to evaluate advanced glycation endproducts (AGE) formation by detecting argpyrimidine (AP) formation. Furthermore, the human neuroblastoma cells (SH-SY5Y) were used to investigate the neuroprotective effect of resveratrol oligomers by inhibiting MGO-induced cell damages, in which the cell viability was measured by sulforhodamine B (SRB) assay and lactate dehydrogenase (LDH) activity assay. In addition, the MAO-B inhibition was evaluated with a fluorimetric method by using the p-tyramine as the substrate.

Results. Both GJ3 and GJ10 could reduce the AP formations in the BSA/MGO model of a 3-day incubation and showed significant differences ($P < 0.01$ and $P < 0.001$, respectively) compared to the control. Moreover, GJ3 and GJ10 also increased the cell survival from 59% up to 79% and 87%, respectively and reduced LDH release in MGO-mediated cell death. The resveratrol and its oligomers GJ2, GJ3, GJ10 were showed MAO-B inhibitory activity, with IC_{50} values of 4.08, 3.23, 0.697, 0.639 μ M, respectively, compared to positive control L-deprenyl (IC_{50} , 0.117 nM).

Discussion. These results demonstrated that GJ3 and GJ10 possessed better anti-glycation ability, neuroprotective properties, and MAO-B inhibitory activity than those of resveratrol.

Conclusions. The present results support that GJ3 and GJ10 might be beneficial to have neuroprotective activities which might improve neurodegenerative disease, and need future investigations.

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Ameliorative and synergistic effects of ergothioneine and hispidin on memory dysfunction in diabetic mice

Tuzz-Ying Song¹, Chien-Lin Chen¹, Jhoa-Huei Wu², Jiunn-Wang Liao²

¹*Department of Bioindustry Technology, Dayeh University, Changhua, Taiwan*

²*Graduate Institute of Veterinary Pathobiology, National Chung Hsing University, Taichung, Taiwan*

Background. Patients with long-standing diabetes commonly develop diabetic encephalopathy (DE), which is characterized by cognitive impairment and dementia. Ergothioneine (EGT) and hispidin (HIP) are two active components of many mushrooms especially *Phellinus igniarius*. EGT reduces the cognitive ability of aged mice and the formation of β -amyloid peptide. HIP has been shown to inhibit protein glycosylation and to scavenge oxygen radicals, and its mechanistic actions are related to inhibition of aldose reductase, leading to reduced formation of advanced glycation end products (AGEs). Methylglyoxal (MGO) is a toxic precursor of advanced glycated end-products (AGEs) and responsible for protein glycation.

Objectives. We investigated whether EGT and HIP could protect against MGO (500 mg/kg bw)-induced neuronal cell damage in male Wistar rats.

Methods. Rats treated with methylglyoxal (MGO; 500 mg/kg bw) were used to examine the effects of EGT, HIP, or their combination (EGT+HIP) on learning and memory abilities. The rats were divided into five groups and injected subcutaneously with MGO except for group 1 (normal controls). Group 3 was orally supplemented with EGT [2 mg/kg bw], group 4 with HIP (2 mg/kg bw, p.o.), and group 5 with EGT+HIP. EGT and HIP were provided daily for 88 days, while MGO was provided between days 7 to 56 was used to induce brain neuron cells damage in rats.

Results. The oral pretreatment with EGT and HIP significantly protect against learning and memory deficits in rats treated with MGO. EGT and HIP significantly lowered the serum insulin, AGE, triglycerol, glucose and GOT level, and these protective effects were related with EGT and HIP prompting the GST and SOD activity and decreasing MDA and AGEs formation in brain and liver. In addition, EGT content of EGT-treated group was significantly higher than that of the other groups in the serum, brain and liver of rats. However, there is no synergistic effect by combination of EGT and HIP.

Discussion. The results revealed that EGT can be absorbed and accumulated in vivo so as to maintain the biological activity of the effective dose, and it helps to reduce the AGEs induced by MGO.

Conclusions. EGT and HIP effectively protects against learning and memory deficits related to DE, possibly through attenuation of oxidative damage and AGEs formation.

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Ginseng flower reversed the memory deficits caused by high fructose-fed rats via cortical antioxidant defenses and CREB-1 levels

Chi-Rei Wu¹, Nai-Wen Mei², Li-Wei Lin³, Fan-Shiu Tsai³, Hsueh-Hung Shao¹

¹*Department of Chinese Pharmaceutical Sciences and Chinese Medicine Resources, China Medical University, No. 91 Hsueh Shih Road, Taichung, Taiwan*

²*Gincare INT'L ENT. Co., LTD., Taipei, Taiwan*

³*School of Chinese Medicines for Post-Baccal aureate, I-Shou University, Kaohsiung, Taiwan*

Background. According to the research of epidemiologists, 171 million peoples were estimated to have Type 2 diabetes, and this is expected to increase to 366 million by 2030. There is increasing evidence indicates that excessive intake of fructose may play a role in diabetes.

Objectives. The first aim was to evaluate the improving effects of ginseng flower in the memory deficit caused by continuously feeding with high fructose in rats. Furthermore, we demonstrated the role of antioxidant defense and cellular signal transduction on the improving effects of ginseng flower.

Methods. Ginseng flowers were extracted with hot water and dried via freeze dryer. Six ginsenosides in the extract were measured by HPLC -DAD. The extract was intragastric administered to rats during high fructose feeding period. After fifty day after feeding, cognitive function were assessed by automated motor activity and water maze. After sixty day, all rats were sacrificed and their brains were homogenized. The intracellular antioxidant makers and signal transduction were assayed by ELISA and western blot.

Results. Each gram of the extract mainly contains 1.70 mg Rb1, 3.96 mg Rg1 and 5.12 mg Rd. High fructose caused the impairment of reference memory but not spatial performance on Morris water maze in rats. Ginseng flower extract reversed the memory deficits caused by high fructose. Furthermore, we also found that high fructose decreased the activities of cortical antioxidant enzymes and increased the cortical MDA levels in rats. High fructose-fed rats showed the lower expression of cortical and hippocampal CREB-1 and CaMPK-IV proteins. Ginseng flower extract also reversed the alterations of cortical antioxidant enzymes and the expression of CREB-1 and CaMPK-IV proteins.

Conclusions. Ginseng flower improved the deterioration of memory deficit caused by high fructose feeding in rats, and the effects might be through its active components ginsenoside Rb1 and Rg1. Then these effects might be related to the decrease in cortical oxidative damage via reversing the activities of antioxidant enzymes, and then the reversal of the expression of CREB-1 and CaMPK-IV proteins.

P-23

Anti-depressant-like activities of probiotic and plant ferment in chronic corticosterone-treated mice

Yen-Wenn Liu¹, Pei-Hsuan Chiang², Chia-Li Wei², Jui-Ting Yen¹, Yun-Fang Cheng¹, Chih-Chieh Hsu³, Chien-Chieh Chen⁴, Ying-Chieh Tsai¹

¹ *Institute of Biochemistry and Molecular Biology, National Yang-Ming University, No.155, Sec.2, Linong Street, Taipei City 11221, Taiwan*

² *Department of Biochemical Science and Technology, National Chiayi University, No.300 Syuefu Rd., Chiayi City 60004, Taiwan*

³ *Bened Biomedical, 2F-2, No.129, Sec.2, Zhongshan N. Rd., Taipei 104, Taiwan*

⁴ *Department of Biotechnology, HungKuang University, No. 1018, Sec. 6, Taiwan Boulevard, Shalu District, Taichung City 43302, Taiwan*

Background. Depressive disorders are associated with dysregulation of the HPA axis. Some botanicals are known to exhibit anti-depressant like effects. Recently, probiotics were reported to have beneficial effects on depression.

Objectives. The present study aimed to investigate the anti-depressant like effects of a fermentation product of bitter melon (*Momordi cacharantia*), Polygala radix (*Polygala tenuifolia*), and probiotic F3-15.1 in animal models.

Methods. DPPH radical scavenging activity assay was used to evaluate the antioxidant potential of the fermentation product. The phytochemical contents in the fermentation product were analyzed. The F3-15.1 and botanicals fermentation product was orally administered to chronic corticosterone-treated mice. Open field and forced swim tests were carried out to evaluate the anti-depressant like effects.

Results. F3-15.1 fermented bitter melon and Polygala radix extracts showed increased total phenols and flavonoids contents and better DPPH radical scavenging activity. In animal models, F3-15.1 and botanicals ferment reversed the depression behaviors of corticosterone-treated mice in open field and forced swim tests.

Discussion. Probiotic F3-15.1 enhanced the anti-depression effects of the botanical extracts, bitter melon and Polygala radix. F3-15.1 fermentation increased the total phenols and flavonoids contents and free radical scavenging activity in botanical extracts.

Conclusions. Probiotic F3-15.1 and botanicals ferment reversed depression behaviors in corticosterone-treated mice. Probiotic F3-15.1 and its botanical ferment might be anti-depression alternatives.

P-24

***p*-Hydroxybenzyl alcohol, an active phenolic ingredient of *Gastrodia elata*, reverses the cycloheximide-induced memory deficit through activating adrenal gland in rats**

Fan-Shiu Tsai¹, Lung-Yuan Wu¹, Wang-Chuan Chen¹, Chin-Chuan Tsai^{1,2}, Chi-Rei Wu³, Li-Wei Lin^{1,*}

¹*The School of Chinese Medicine for Post-Baccalaureate, I-Shou University, No.8, Yida Rd., Yanchao Township, Kaohsiung County 82445, Taiwan, R.O.C.*

²*E-DA Hospital, No.1, Yida Rd., Yanchao Township, Kaohsiung 82445 Taiwan, R.O.C.*

³*Department of Chinese Pharmaceutical Sciences and Chinese Medicine Resources, College of Pharmacy, China Medical University, Taichung 40402, Taiwan, R.O.C.*

Background. This present study was investigated the ameliorating effects of *p*-hydroxybenzyl alcohol (HBA), an active phenolic ingredient of *Gastrodia elata*, on cycloheximide (CXM)-induced impairment of passive avoidance response and clarified the role of adrenal glands on the effect of HBA in rats. Adrenalectomy (ADX) caused the memory deficit from 1 to 3 days after surgery. Administration of corticosterone (CORT) plus glucose completely recovered the memory deficit caused by ADX, and this effect was better than that of glucose or CORT alone.

Results. Administration of corticosterone (CORT) plus glucose completely recovered the memory deficit caused by ADX, and this effect was better than that of glucose or CORT alone. HBA ameliorated the memory deficit induced by CXM in sham and ADX rats, but ADX partially blocked it. Furthermore, plasma glucose, epinephrine and adrenal steroid levels of ADX rats significantly decreased. Sham rats received HBA had an increase in plasma glucose and adrenal steroid levels.

Conclusions. We suggested that reversal of CXM-induced memory deficit by HBA was partially dependent on adrenal glands through increasing the levels of plasma adrenal steroids.

Antidepressant-like activity of the extract from Semen Cucurbitae after application of atmospheric plasma technology in the forced swimming test and in the tail suspension test in mice

Yun-Chieh Chen², Chuan-Sung Chiu⁵, Chun-Pin Kao⁵, Po-Long Wu³, Lung-Yuan Wu⁴, Jung-Chun Liao², Ying-Chih Lin⁶, Yu-Chin Lin⁷, Wen-Huang Peng¹

¹*School of Chinese Pharmaceutical Sciences and Chinese Medicine Resources, College of Biopharmaceutical and Food Sciences, China Medical University, No. 91, Hsueh-Shih Road, Taichung 404, Taiwan, ROC*

²*School of Pharmacy, College of Pharmacy, China Medical University, No. 91, Hsueh-Shih Road, Taichung 404, Taiwan, ROC*

³*Refining and Manufacturing Research Institute, CPC corporation, No.217, Minsheng S. Rd., West Dist., Chiayi City 600, Taiwan, ROC*

⁴*School of Chinese Medicine for Post Baccalaureate, I-Shou university, No.1, Sec. 1, Syuecheng Rd., Dashu District, Kaohsiung City 84001, Taiwan, R.O.C.*

⁵*Department of Nursing, Hsin Sheng College of Medical Care and Management, Taoyuan, Taiwan, R.O.C.*

⁶*Department of Optometry, Jen-Teh Junior College of Medicine, Nursing and Management, Miaoli, Taiwan, R.O.C.*

⁷*Department of Medicinal Botanicals and Health Applications, College of Biotechnology and Bio-resources, Da-Yeh University, 168 University Rd, Dacun, Chang-Hua, Taiwan, R.O.C.*

Objectives. This study was investigated the antidepressant activity of extract of Semen Cucurbitae after application of atmospheric plasma technology (SCAPT) for two-weeks administrations by using FST and TST on mice.

Methods. In order to understand the probable mechanism of antidepressant-like activity of SCAPT in FST and TST, the researchers measured the levels of monoamines and monoamine oxidase activities in mice brain, and combined the antidepressant drugs (fluoxetine, imipramine, maprotiline, clorgyline, bupropion and ketanserin). Lastly, the researchers analyzed the content of tryptophan in the SCAPT.

Results. The results showed that SCAPT exhibited anti-depressant-like activity in FST and TST in mice. SCAPT increased the levels of monoamines and its metabolites in cortex, hippocampus, striatum and hypothalamus. SCAPT inhibited the MAO-A activity and increased CREB protein expression. Two-week injection of IMI, CLO, FLU, MAP and BUP enhanced the anti-depressant-like activity of SCAPT. SCAPT inhibited the activity of MAO-A. The amount of tryptophan in SCAPT was 78.66 mg/g extract.

Conclusions. Our findings support the view that SCAPT exerts antidepressant-like activity. The antidepressant-like mechanism of SCAPT may be related to the increase in monoamines levels in the hippocampus, cortex, striatum, and hypothalamus of mice.

Acupuncture and electroacupuncture deliver a TRPV1-dependent signaling pathways in central spinal cord level

Ming-Yen Chen¹, Yi-Wen Lin^{1, 2}

¹*Graduate Institute of Acupuncture Science, China Medical University, No.91, Hsueh-Shih Road, Taiwan*

²*Research Center for Chinese Medicine & Acupuncture, China Medical University, No.91, Hsueh-Shih Road, Taiwan*

Background: Acupuncture, which is belonged to Chinese medicine, is well documented for its therapeutic effect in several diseases for more than 3000 years. Acupuncture is inserting a fine needle into a specific point, which is often called acupoint, to initiate a phenomenon such as de-qi. De-qi is a crucial indicator during acupuncture treatments, which are some obvious feelings such as soreness, heaviness, fullness, numbness, and migration.

Objectives: Acupoints are characterized as a point locating in deep tissues with abundant sensory nerve terminals, suggesting a highly relationship between acupoints with peripheral sensory afferents. Here we want to identify if manual acupuncture (MA) or electroacupuncture (EA) share similar mechanisms or not.

Methods: We used MA or EA at ST36 acupoint to verify TRPV1 related signaling pathways. We further used immunostaining and Western blot technique to determine downstream molecules involved in acupuncture manipulation.

Results: Our results showed that either MA or EA at ST36 acupoint significantly increased pPKA (MA: 125.88 ± 0.2 ; EA: 118.4 ± 0.53), pPI3K (MA: 123.1 ± 2.16 ; EA: 135.9 ± 0.59), pPKC (MA: 133.19 ± 15.18 ; EA: 144.08 ± 10.18), and pCaMKII (MA: 216.34 ± 21.91 ; EA: 207.74 ± 14.11) level in central spinal cord (SC) level. We next showed that the downstream molecules such as pERK (MA: 175.4 ± 7.01 ; EA: 170.93 ± 29.09) and pAKT (MA: 175.4 ± 7.01 ; EA: 170.93 ± 28.09) were increased with MA or EA stimulation suggesting its crucial role in MA or EA manipulation. The aforementioned molecules were reduced in TRPV1 null mice suggesting its crucial role in MA or EA manipulation.

Discussion: We indicate that MA or EA could induce a mechanical stimulation in central SC level. Significant signal molecules were potentiated under MA or EA manipulation and could be prevented in TRPV1 knockout mice.

Conclusions: Our study provides an important role of TRPV1 and related mechanisms for acupuncture manipulation.

P-27

Therapeutic effect of electroacupuncture on a mice fibromyalgia pain model: role of NMDA receptors and related mechanisms

Jung Yang¹, Yi-Wen Lin^{2,3}

¹China Medical University Hospital, Department of Chinese Medicine, No.91, Hsueh-Shih Road, Taiwan

²Graduate Institute of Acupuncture Science, China Medical University, No.9, Hsueh-Shih Road, Taiwan

³Research Center for Chinese Medicine & Acupuncture, China Medical University, No.91, Hsueh-Shih Road, Taiwan

Background. A large increasing body of evidence shows N-methyl-D-aspartate (NMDA) receptor and related molecules are crucial for pain signaling but unclear in fibromyalgia (FM).

Objectives. Using a mice FM model and multiple approaches, we want to identify if 2 Hz EA can reduce FM hyperalgesia.

Methods. We utilized electrical von Frey filament test to examine if 2hz EA can reduce hyperalgesia in FM mice. We further used immunostaining and Western blot technique to verify if NMDA subunits, mainly NR1 and NR2B, were increased in dorsal root ganglion (DRG) and spinal cord (SC) in FM mice.

Results. The increase of mechanical hyperalgesia was significantly observed after dual acid saline injection (2.18 ± 0.27 g, $p < 0.05$, compared with control group, $n = 8$) and attenuated by EA (4.23 ± 0.33 g, $p < 0.05$, compared with FM group, $n = 8$) but not in the sham EA group (2.37 ± 0.14 g, $p < 0.05$, compared with EA group, $n = 8$). In DRG, pNR1 and pNR2B were significantly increased ($132.21 \pm 14.4\%$ and $116.69 \pm 3.22\%$) but not in total NR1 and NR2B level ($97.31 \pm 3.79\%$ and $97.07 \pm 2.27\%$). Overactivation of pNR1 and pNR2B further increase relevant molecules such as pCaMKII α and pCREB.

Discussion. We showed that pNR1 and pNR2B are crucial for FM pain relief and EA can regulate such phenomena. Aforementioned signaling is crucial with the impact of EA in reducing mechanical hyperalgesia initiated from FM.

Conclusions. The current study provides a crucial role of ASIC3 and related mechanisms for treating FM-induced mechanical hyperalgesia.

Analgesic effect of electroacupuncture in a mouse fibromyalgia model: Role of ASIC3 and relevant molecules

Liang-Ta Yen¹, Yi-Wen Lin^{1, 2}

¹*Graduate Institute of Acupuncture Science, China Medical University, No.91, Hsueh-Shih Road, Taiwan*

²*Research Center for Chinese Medicine & Acupuncture, China Medical University, No.91, Hsueh-Shih Road, Taiwan*

Background. Many scientists are seeking for better therapy to treat fibromyalgia (FM) pain syndrome. Until now, FM is still a puzzling muscle pain syndrome accompanied by chronic widespread mechanical pain.

Objectives. Acid-sensing ion channel 3 (ASIC3) is a key receptor in FM pain. The effect of EA on ASIC3 and related molecules expression is still unknown.

Methods. We used electrical von Frey filament test to examine if EA can relieve mechanical pain in a mice FM model. We further used immunostaining and Western blot technique to verify if ASIC3 was altered after FM modeling.

Results. Our results demonstrated that mechanical hyperalgesia was successfully induced in mice (2.16 ± 0.24 g, $p < 0.05$, compared with control group, $n = 8$). We determined that EA could attenuate mechanical hyperalgesia from FM mice (4.21 ± 0.31 g, $p < 0.05$, compared with FM group, $n = 8$). We further showed that ASIC3, Nav1.7, and Nav1.8 were increased at establishment of priming stage. We also determined that EA could reliably abolish the overexpression of ASIC3, Nav1.7, and Nav1.8.

Discussion. We indicate that ASIC3 and Nav sodium channels were increased at 8 days after FM modeling. EA at ST36 acupoint for 4 successive days can successfully alleviate the overexpression of these proteins. We suggest that EA may trigger release of adenosine or endomorphine to reduce mechanical hyperalgesia in this FM mice model.

Conclusions. The current study provides a crucial role of ASIC3 and related mechanisms for treating FM-induced mechanical hyperalgesia.

Processed aconite root (附子) and its active ingredient neoline may alleviate oxaliplatin-induced peripheral neuropathic pain

Toshiaki Suzuki^{1,3}, Keisuke Miyamoto², Naomi Yokoyama¹, Mayuko Sugi¹, Akina Kagioka¹, Takumi Adachi¹, Masahiro Ohsawa², Hajime Mizukami^{1,4}, Toshiaki Makino¹

¹Dept. Pharmacog., and ²Dept. Neuropharmacol., Grad. Sch. Pharm. Sci., Nagoya City Univ., Nagoya, Japan; ³Dept. Cell. Pharmacol., Grad. Sch. Pharm. Sci., Nagoya Univ., Nagoya, Japan; ⁴Kochi Pref. Makino Botanical Garden, Kochi, Japan

Background. Processed aconite root (PA, the root of *Aconitum carmichaeli*, Ranunculaceae) is a crude drug used in traditional Chinese or Japanese kampo medicine to generate heat in the body and to treat pain associated with coldness. Oxaliplatin (L-OHP) is a platinum-based anticancer drug that frequently causes acute and chronic peripheral neuropathies, including cold and mechanical hyperalgesia. Masahiro Ohsawa

Objectives. We investigated the effects of PA on L-OHP-induced peripheral neuropathies and identified the active ingredient within PA extract.

Methods. L-OHP was intraperitoneally injected into mice, and PA boiled water extract was orally administered. Cold and mechanical hyperalgesia were evaluated using the acetone test and the von Frey filament method, respectively. Dorsal root ganglion (DRG) neurons were isolated from normal mice and cultured with L-OHP with or without PA extract. Cell viability and neurite elongation were evaluated.

Results and Discussion. PA extract significantly attenuated cold and mechanical hyperalgesia induced by L-OHP in mice. In cultured DRG neurons, L-OHP reduced cell viability and neurite elongation in a dose-dependent manner. Treatment with PA extract significantly alleviated the L-OHP-induced reduction of neurite elongation, while the cytotoxicity of L-OHP was not affected. Using activity-guided fractionation, we isolated neoline from PA extract as the active ingredient. Neoline significantly alleviated L-OHP-induced reduction of neurite elongation in cultured DRG neurons in a concentration-dependent manner. Moreover, subcutaneous injection of neoline attenuated cold and mechanical hyperalgesia in L-OHP-treated mice.

Conclusions. The present study indicates that PA and its active ingredient neoline are promising agents to alleviate L-OHP-induced neuropathic pain.

Partial activation and inhibition of TRPV1 channels by evodiamine and rutaecarpine, two major components of *evodiae fructus*

Shenglan Wang^{1,2}, Satoshi Yamamoto¹, Yoko Kogure¹, Koichi Noguchi^{2,3}, Yi Dai^{1,2,3}

¹*Department of Pharmacy, School of Pharmacy, Hyogo University of Health Sciences. Kobe, Hyogo 6508530, Japan.*

²*Traditional Medicine Research Center, Chinese Medicine Confucius Institute at Hyogo College of Medicine, Kobe, Hyogo 6508530, Japan.*

³*Department of Anatomy and Neuroscience, Hyogo College of Medicine, Nishinomiya, Hyogo 6638501, Japan.*

Background. TRPV1, as a critical therapeutic target for treatment of pain and other diseases, many its antagonists have been developed for clinical trials. However these antagonists showed worrisome adverse effect of hyperthermia. *Evodiae fructus* (EF) has been used since long for the treatment of kinds of diseases in traditional medicines. As two major components of EF, evodiamine and rutaecarpine have been reported to possess multiple biological effects which are related to TRPV1 activity.

Objectives. Here, we investigate the effects of evodiamine and rutaecarpine on TRPV1 activation.

Methods. We transfected TRPV1 or TRPA1 cDNA into HEK293 cells and performed whole cell patch clamp recordings. The effects of the compounds against capsaicin-, proton- or heat-activated TRPV1 activities were evaluated respectively.

Results. We found that evodiamine and rutaecarpine could activate TRPV1 as same as capsaicin. The maximum response was 3.5- or 9- times lower than capsaicin, suggesting the partial agonism. In comparison to capsaicin, co-administration of evodiamine and capsaicin showed a right-shifted EC50 of capsaicin-activated TRPV1 currents in dose-response curve. Whereas, co-administration of evodiamine with proton failed to inhibit the proton-induced current. In experiments of heat-induced TRPV1 activation, both evodiamine and rutaecarpine decreased the responsivity of TRPV1 to temperature. On the other hand, pre-administration of evodiamine, but not rutaecarpine inhibited either capsaicin or proton-induced TRPV1 currents; which might involve the channel desensitization.

Discussion. Agonists can suppress channel activity through desensitization or partial competitive inhibition modes. The electrophysiological results suggested that evodiamine and rutaecarpine partially activate TRPV1 and inhibit capsaicin (or proton or heat)-induced TRPV1 activation through competitively partial antagonism and/or channel desensitization.

Conclusions. Consider that EF has been used as a traditional medicine for treating various diseases without the undesirable side effect of hyperthermia, our observations may provide important evidence and revelation, which the two natural compounds may represent a useful starting point for the development of new potent TRPV1 desensitizers/antagonists.

Paeonol increases the excitability and reduces delayed outward potassium currents in hippocampal CA1 neurons: role of Kv 2.1

Chin-Tsang Yang¹, Yi-Hung Chen²

¹*School of Chinese Medicine, China Medical University, Taichung, Taiwan*

²*Graduate Institute of Acupuncture Science, China Medical University, Taichung, Taiwan*

Background: Our previous studies established that 2'-hydroxy-4'-methoxyacetophenone (paeonol), one of the major components of Moutan Cortex, significantly inhibited the delayed outward potassium current and increased the excitability of action potentials in hippocampal CA1 neuron, but these effects were not observed in nucleus ambiguus (NA) neurons. While the mechanism of these effects were not clear. Voltage-gated K⁺ (Kv) channels play a major role in determining the excitability of neurons. The Kv1–Kv4 subfamilies are the most widely expressed in the CNS. Kv2.1 constitutes the major delayed outward Kv channel in hippocampal pyramidal neurons.

Objective: Compare the effects of paeonol on Kv2.1 and Kv1.2 current and potassium current in CA1 hippocampal neurons and NA neurons.

Method: Whole-cell patch-clamp recordings were used to investigate the electrophysiological effects of paeonol, in hippocampal CA1 neurons and NA neurons from neonatal rats as well as in lung epithelial H1355 cells expressing Kv2.1 or Kv1.2.

Results: Extracellular application of paeonol (100 μM) reversibly inhibited the Kv2.1 current expressed in H1355 cells, but failed to reduce the Kv1.2 current. The inhibitor of Kv2, guangxitoxin-1E (100 nM), reduced the delayed outward potassium currents in hippocampal neurons, but had only minimal effects in NA neurons. Extracellular application of paeonol at 300 μM increased the frequency of spontaneous action potentials and enhanced miniature post-synaptic current (mEPSC) frequencies without affecting their amplitude.

Discussions: Paeonol (100 μM) reduced the Kv2.1 current in H1355 cells, but not the Kv1.2 current, which suggests different effects of paeonol in Kv subfamilies. The inhibitor of Kv2, guangxitoxin-1E, reduced the delayed outward potassium currents in hippocampal neurons, but had only minimal effects in NA neurons. These results support the contention that the paeonol-induced reduction of delayed outward potassium currents in hippocampal neurons may be due to the inhibition of Kv2.1. Our findings suggest the possibility of increased neurotransmitter release. Extracellular application of paeonol at 300 μM enhanced miniature post-synaptic current (mEPSC) frequencies without affecting their amplitude, indicated that paeonol promotes pre-synaptic neurotransmitter release in hippocampal CA1 neurons. The use of paeonol, as a potential nootropic agent in the treatment of AD warrants future studies.

Conclusions: Paeonol decreased the delayed outward potassium current and increased excitability in hippocampal CA1 neurons, whereas these effects were not observed in NA neurons. These effects may be associated with the inhibitory effects on Kv2.1 currents. Further, paeonol may promote pre-synaptic neurotransmitter release in hippocampal CA1 neurons.

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Protective effects of loganin against Parkinson's toxin-induced neurite damage and apoptotic cell death in primary mesencephalic neurons

Yu-Ting Tseng^{1,2}, Yi-Ching Lo^{1,2,3*}

¹Graduate Institute of Natural Products, College of Pharmacy, Kaohsiung Medical University, Kaohsiung 80708, Taiwan

²Department of Pharmacology, College of Medicine, Kaohsiung Medical University, Kaohsiung 80708, Taiwan

³Graduate Institute of Medicine, College of Medicine, Kaohsiung Medical University, Kaohsiung 80708, Taiwan

Background. Oxidative stress implicates in a variety of neurodegenerative disorders, including Parkinson's disease. Loganin is an iridoid glycoside from *Corni Fructus*, which has been known to exhibit anti-inflammatory and anti-oxidative properties. However, the protective effect of loganin in Parkinson's toxin-induced neurotoxicity remains uninvestigated.

Objectives. The present study aims to investigate the neuroprotective effects of loganin on 1-methyl-4-phenylpyridinium (MPP⁺), a well-known Parkinson's toxin, in primary mesencephalic neurons.

Methods. Cell viability was measured by MTT and LDH assay. Protein expression was analyzed by western blot analysis. Morphological changes of neurite lengths were observed by an inverted microscope. Reactive oxygen species (ROS) production and apoptotic cell numbers were measured by flow cytometer using H₂DCF-DA staining and Annexin V staining, respectively.

Results. In primary mesencephalic neurons, MPP⁺ significantly induced neurite damage and cell death. However, loganin treatment attenuated MPP⁺-induced neuronal damage. Loganin decreased MPP⁺-induced apoptotic cell death accompanied by up-regulation of Bcl-2 and down-regulation of Bax and cleaved caspase-3. Moreover, loganin attenuated MPP⁺-induced ROS production. Furthermore, loganin attenuated MPP⁺-induced neurite damage via regulating Akt-related and RhoA-related pathways.

Discussion. The present results indicated loganin possesses neuroprotective effects via its anti-oxidant and anti-apoptotic effects in cellular models. However, the *in vivo* model is needed to proceed to confirm the neuroprotective effects of loganin in the future.

Conclusions. Loganin attenuated MPP⁺-induced neurite damage, oxidative stress, and apoptotic neuronal death, suggesting the neuroprotective potential of loganin.

Increasing neuroprotective effects of micronized *Hericium erinaceus* mycelium showed promising in anti-Parkinson's disease

Yu-Min Lin, Hsin-Ying Lin, Win-Chin Chang

JOWIN BIOPHARMA, Inc. 9F.-12, No.97, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 22175, Taiwan (R.O.C.)

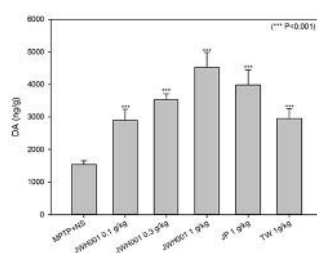
Background. Current therapy for Parkinson's disease is just relief of symptoms instead of permanent cure. *Hericium erinaceus* has been used as a food and herbal medicine since ancient times in Japan and China. Its active compounds, hericenones from the fruiting body and erinacines from the mycelium, or functional extracts have also been proven to promote NGF synthesis, to exert neuroprotection and to improve mild cognitive impairment *in vitro* and *in vivo*¹²³. These findings indicate that *H. erinaceus* may be useful in the prevention of neurodegenerative diseases including Parkinson's disease.

Objectives. Particle size reduction for improvement of oral bioavailability of hydrophobic drugs has been well-defined⁴. In this study, we investigated the neuroprotective effects of micronized powder made of *H. erinaceus* mycelium solid-state fermentation on Parkinson's disease model in Mice.

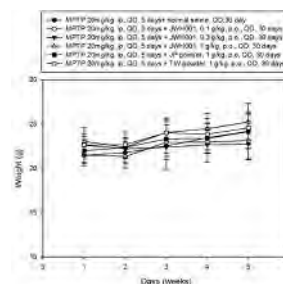
Methods. We treated mice (C57BL/6) daily with 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) hydrochloride (20 mg/kg, ip) for 5 days and combined with 0.1-1g/kg micronized *H. erinaceus* mycelium or saline vehicle (NS) for 30 consecutive days via oral gavage. Mice were euthanized on 31th day and striatal dopamine (DA) concentrations were determined by HPLC with electro-chemical detection.

Results. Oral treatment of micronized *H. erinaceus* mycelium to mice showed increased DA in striatum in a dose-dependent manner (Fig. A). We also compared the functional differences among originally raw powder (TW), micronized powder (JWH001) and broken cell-wall powder of *H. erinaceus* fruiting

body from Japan (JP). (A)



(B)



Discussion. Minimum effective dose (MED) of oral treatment is 0.1g/kg and 1g/kg seems to be no growth inhibition (Fig. B), which suggest the safety and significant therapeutic window of our test substance.

Conclusions. Micronized *H. erinaceus* mycelium showed promising in anti-Parkinson's disease.

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P-34

Dual effect of WIN-34B, a new herbal medicine, on osteogenesis and anti-osteoclastogenesis in cytokine-induced mesenchymal stem cells and bone marrow cells

Byung-Kwan Seo¹, Yeon-Cheol Park¹, Yong-Hyeon Baek¹

¹Department of Acupuncture & Moxibustion, College of Korean Medicine, Kyung Hee University, 26, Kyungheedaero-ro, Dongdaemun-gu, Seoul, 02447, Korea

Background. The anti-inflammatory and anti-nociceptive effects of WIN-34B, herbal medicine prepared as extracted mixture of dried *Lonicera japonica* flowers and *Anemarrhena asphodeloides* root have been reported. Also cartilage repair and protective effects were confirmed.

Objectives. The purpose of this study was to investigate the effect of WIN-34B on osteogenesis and osteoclastogenesis in cytokine-induced mesenchymal stem cells and bone marrow cells.

Methods. The osteogenic differentiation was evaluated using human mesenchymal stem cells (hMSCs) treated with WIN-34B. Alkaline phosphatase (ALP) stain and Von Kossa stain was conducted. Mice bone marrow macrophages (BMMs) were obtained and treated receptor activator of nuclear factor- κ B ligand (RANKL), macrophage colony stimulating factor (M-CSF) for inducing osteoclastogenesis. The osteoclast differentiation was evaluated using tartrate-resistant acid phosphatase (TRAP)-stain. Osteoclastogenic conditions were induced by stimulating with IL-1 α , IL-17, and TNF- α in hMSCs and BMMs co-culture systems. The expression of osteoprotegerin (OPG), RANKL, runt-related transcription factor 2 (RUNX2), IL-17, c-Fos, TNF- α , and glyceraldehyde-3-phosphate dehydrogenase (GAPDH) were measured by RT-PCR. And the expression of nuclear factor-kappaB (NF- κ B), inhibitory kappa B- α (I κ B α), phospho-NF- κ B, phospho-I κ B α , β -actin, p38 MAPK, phospho-c-Jun N-terminal kinase (JNK), phospho-extracellular-signal regulated kinase (ERK), phospho-p38 mitogen-activated protein kinase (MAPK), phospho-JNK, and phospho-ERK were measured by Western blot analysis.

Results. WIN-34B promoted ALP activity and mineralization of hMSCs. The number of multinucleated cells was decreased after WIN-34B treatment. WIN-34B increased the OPG/RANKL ratio and the expression of RUNX2, and suppressed the expression of IL-17, c-Fos, and TNF- α . In dose-dependently manner, WIN-34B suppressed activation of NF- κ B, I κ B α and p38 MAPK, and JNK.

Discussion. These results demonstrated that WIN-34B increased osteogenesis and decreased osteoclastogenesis in cytokine-induced mesenchymal stem cells and bone marrow cells via the inhibition of NF- κ B, JNK, and p38 MAPK pathways.

Conclusions. The ST36 BVA treatment can relieve the inflammatory pain induced by CIOA through partial involvement of δ -opioid and α 2-adrenergic receptor. BVA can be a potential candidate for the treatment of inflammatory pain related with OA.

Fang-Yu Liang¹, Yi-Wen Mao², Mei-Hsien Lee^{1,3,*}

¹Graduate Institute of Pharmacognosy, Taipei Medical University, Taipei 110, Taiwan

²School of Pharmacy, College of Pharmacy, Taipei Medical University, Taipei 110, Taiwan

³Ph.D. Program for the Clinical Drug Discovery from Botanical Herbs, Taipei Medical University, Taipei 110, Taiwan

Background.

Wikstroemia taiwanensis (Thymelaeaceae) is one of Taiwanese endemic plant. In previous studies, bicoumarins, flavonoids, sesquiterpenes, lignans, and phenols were found in the genus *Wikstroemia*. Osteoblasts and osteoclasts played the important roles during bone remodeling. Oxidative stress influenced the bone formation by osteoblast cells.

Objectives.

We explore the chemical analysis including phenolic and flavonoid contents, as well as antioxidant and osteogenetic activities of extracts of different parts from *W. taiwanensis*.

Methods.

The leaves, stems and roots of *W. taiwanensis* were extracted by 70% acetone, respectively. Total phenolic and flavonoid contents of the extracts were determined by the Folin-Ciocalteu and aluminum chloride colorimetric methods, separately. Antioxidant activities were analyzed using DPPH and ABTS assays. Cell viability was determined by MTT assay, osteogenetic activities were determined by alkaline phosphatase (ALP) activity and mineralization assay in both human osteoblast-like cell line (MG-63) and primary human osteoblast cells (HOb).

Results.

The root and stem extracts showed higher phenolic and flavonoid contents (more than 100mg gallic acid and rutin equivalent/g of extract) and possessed the better antioxidant activities (DPPH and ABTS) than the leaf extracts. The different parts from *W. taiwanensis* showed osteogenetic-inducing activities by regulating differentiation and mineralization in MG-63 and HOb cells.

Discussion.

The leaves of *W. taiwanensis* showed significantly radical-scavenging abilities in the present study. Previous studies showed that antioxidants could induce osteoblast differentiation and benefit to bone formation.

Conclusions.

W. taiwanensis exhibited good antioxidant and osteogenetic activities. They contained the higher phenols and flavonoids.

Evaluation of osteogenetic and antioxidant activities as well as the chemical analysis of Taiwanese endemic plants.

Tzu-Tung Liao¹, Yi-Wen Mao², Ih-Sheng Chen³, Mei-Hsien Lee^{1,4*}

¹*Graduate Institute of Pharmacognosy, Taipei Medical University, Taipei 110, Taiwan;* ²*School of Pharmacy, College of Pharmacy, Taipei Medical University, Taipei 110, Taiwan;* ³*School of Pharmacy, Kaohsiung Medical University, Kaohsiung 80708, Taiwan;* ⁴*Ph.D. Program for the Clinical Drug Discovery from Botanical Herbs, Taipei Medical University, Taipei 110, Taiwan*

Background. Oxidative stress and osteoporosis had been reported a certain relationship. The constituents (eg: phenols and flavonoids) containing in plants have the abilities to scavenge free radicals. There are 4077 species native plants in Taiwan, part of which contain 1067 species endemic plants, but there were few studies of Taiwanese endemic plants in the past.

Objectives. We evaluated twenty-one species of Taiwanese endemic plants by various in vitro assays including the establishment of the early and late stage biomarkers of osteogenetic, antioxidant assays, and chemical analysis.

Methods. The antioxidant activities were determined by scavenging 2,2'-diphenyl-1-picrylhydrazyl (DPPH) and 2, 2'-azino-bis (3-ethylbenzothiazoline-6-sulfonicacid) (ABTS) radicals. Total phenol and flavonoid contents were using Folin-Ciocalteu reagent and aluminum chloride methods, respectively. The osteogenetic activities were evaluated by alkaline phosphatase (ALP) activity assay and alizarin-red S stain assay in human osteoblast-like cell line (MG-63).

Results. Nine plants demonstrated containing higher total phenol contents (more than 100 mg gallic acid equivalent/g of extract), eleven plants exhibited higher total flavonoid contents (more than 100 mg rutin equivalent/g of extract), and these plants also exhibited good antioxidant activities. In addition, nine plants enhanced the ALP activity, and ten plants stimulated mineralization in MG-63 cells.

Discussion. From the results, there were some correlation between antioxidant and osteogenetic activities among these Taiwanese plants. Further researches are needed to clarify the osteogenetic mechanisms of these plants.

Conclusions. Taiwanese endemic plants exhibited excellent antioxidant and osteogenetic activities. They maybe have good potential as the sources for the prevention of oxidative stress and bone diseases.

Yi-Tzu Lin¹, Chung-Yu Huang^{1,2}, Hsiang-Chun Kuo³, Mei-Hsien Lee^{1,3,*}

¹Ph.D. Program for the Clinical Drug Discovery from Botanical Herbs, Taipei Medical University, Taipei 110, Taiwan

²Department of Traditional Medicine, Wan Fang Hospital, Taipei 116, Taiwan

³Graduate Institute of Pharmacognosy, College of Pharmacy, Taipei Medical University, Taipei 110, Taiwan

Background.

Eriobotrya deflexa (Hemsl.) Nakai (*Rosaceae*) is an endemic evergreen tree that grows in broad-leaved forests at about 1500m altitudes throughout Taiwan and southern of China. Dibenzofurans, essential oils, flavonoids, lignans, megastigmanes, monoterpenes, sesquiterpene glycosides and triterpenoids were widely distributed in the plants of the genus *Eriobotrya*. *E. deflexa* was reported exhibiting free radical scavenging and matrix metalloproteinase (MMP)-9 activities.

Objectives.

In this study, we isolated the compounds from *E. deflexa* and investigated their anti-photoaging effects against UVB-irradiated MMP-1 secretions in human dermal fibroblasts.

Methods.

The leaves of *E. deflexa* were extracted with 95% ethanol, partitioned with different solvents, isolated and purified by column chromatography. Cell viability was using thiazolyl blue tetrazolium bromide (MTT) assay. Anti-photoaging activity was determined by analysis of matrix metalloproteinase (MMP)-1 activity in human dermal fibroblasts.

Results.

We isolated ten flavonoids from *E. deflexa* and identified by various physical and spectroscopic characterizations. Four compounds exhibited anti-photoaging activity by inhibiting the expression of UVB-irradiated MMP-1 in human dermal fibroblasts.

Discussion.

Structure-activity relationship studies showed that flavonoids with 3-O glycoside not only exhibited high antioxidant, antimicrobial activities but also inhibited UVB-irradiated MMP-1 expression.

Conclusions.

The active flavonoids isolated from *E. deflexa* decreased UVB-irradiated MMP-1 expression in human dermal fibroblasts. They may be promising for lead compounds anti-photoaging activity.

P-38 ***Phellinus igniarius* extract inhibits hepatitis B virus infection in human hepatocytes**

Cheng Huang¹, Lie-Chwen Lin¹, Hsiu-Chen Huang²

¹*National Research Institute of Chinese Medicine, Ministry of Health and Welfare, Taipei, Taiwan*

²*Department of Applied Science, National Hsinchu University of Education, Hsinchu, Taiwan*

Background. Hepatitis B virus (HBV) is a major cause of liver disease and hepatocellular carcinoma. Chronic HBV infection is currently managed with either nucleoside/nucleotide-based or interferon-based therapies, but fails to clear infection in a substantial proportion of cases, and antiviral strategies targeting the early stages of infection are therefore required for the prevention of HBV infection.

Objective. *Phellinus igniarius* has been used in traditional Asian medicine for over two centuries against a variety of diseases. However, its anti-virus activity remains unclear.

Methods. In this study, we examined some extract fractions of *Phellinus igniarius* and identified fraction 9-e as a new inhibitor of HBV infection.

Results. We demonstrated that fraction 9-e at a concentration of 50 μ M inhibited HBV entry into immortalized human primary hepatocytes by more than 80%, whereas the other fractions tested had much weaker inhibitory effects. DMSO-differentiated HuS-E/2 cells expressed sodium taurocholate cotransporting polypeptide (NTCP), which is a receptor for HBV. Application of fraction 9-e during HBV inoculation markedly inhibited infection in both DMSO-differentiated HuS-E/2 cells and HA-NTCP-expressing Huh7 cells. Treatment of cells with fraction 9-e had no effect on HBV genome replication or virion secretion.

Discussion. The antiviral activity of fraction 9-e on HBV entry was observed using four different genotypes, A to D.

Conclusion. These results show that the extract fractions 9-e of *Phellinus igniarius* potently inhibits HBV entry and could be used in prevention of HBV reinfection.

The hepatoprotective effect of *scoparia dulcis* on carbon tetrachloride induced chronic liver injury in mice

Bao-Jyi Chen¹, Yun-Chieh Chen², Yung-Jia Chiu³, Keng-Fan Liu³, Wen-Huang Peng³, Jen-Chieh Tsai^{1,4,*}

¹Department of Medicinal Botanicals and Health Applications, College of Biotechnology and Bio-resources, Da-Yeh University, 168 University Rd, Dacun, Chang-Hua, Taiwan, ROC.; ²School of Pharmacy, College of Pharmacy, China Medical University, No. 91, Hsueh-Shih Road, Taichung 404, Taiwan, ROC.;

³School of Chinese Pharmaceutical Sciences and Chinese Medicine Resources, College of Biopharmaceutical and Food Sciences, China Medical University, No. 91, Hsueh-Shih Road, Taichung 404, Taiwan, ROC.; ⁴Biotechnology Research Center, Da-Yeh University, 168 University Rd, Dacun, Chang-Hua, Taiwan, ROC.

Background. Liver plays an important role in metabolism and liver tissue injuries can be caused by toxic chemicals, drugs, and virus infection. In our previous study, the hepatoprotective effect of *Scoparia dulcis* on acute liver Injury was indicated.

Objectives. This study aims to investigate the hepatoprotective activity and mechanism of the ethanol extract of *Scoparia dulcis* (SDE) on carbon tetrachloride induced chronic liver injury in mice.

Methods. The hepatoprotective effect of SDE (0.1, 0.5 and 1.0 g/kg) on CCl₄-induced chronic liver injury in mice was performed for 8 weeks. The levels of serum alanine aminotransferase (ALT) and aspartate aminotransferase (AST) were measured. The pathologic biopsies were also examined. The levels of nitric oxide (NO), malondialdehyde (MDA) and antioxidant enzymes such as superoxide dismutase (SOD), glutathione peroxidase (GSH-Px) and glutathione reductase (GSH-Rd) were measured.

Results. The results showed that the serum ALT and AST of CCl₄ group were increased significantly compared to control group. However, the rise of ALT and AST levels was obviously inhibited by treatment with SDE. The pathological biopsies also revealed the liver damages were reduced by pretreatment with SDE. We also found that SDE significantly decreased NO and MDA and exhibited the activities of antioxidant enzymes such as SOD, GSH-Px and GSH-Rd.

Conclusions. These results demonstrated that SDE exhibited potent hepatoprotective effect against CCl₄- induced chronic liver injury and oxidative damage. The mechanism may be due to the inhibition of lipid peroxidation and promotion of the antioxidant enzyme activities.

P-40 Hepatoprotective Effect of *Polygonum orientale* on carbon tetrachloride-induced acute liver damage in mice

Hao-Yuan Cheng¹, Yung-Jia Chiu², Shen-Chieh Chou³, Kun-Chang Wu², Jen-Chieh Tsai⁴,
and Wen-Huang Peng²

¹*Department of Nursing, Chung Jen Junior College of Nursing, Health Sciences and Management, Chia-Yi, Taiwan, R.O.C.*

²*Department of Chinese Pharmaceutical Sciences and Chinese Medicine Resources, College of Biopharmaceutical and Food Sciences, China Medical University, Taichung 404, Taiwan, R.O.C.*

³*Department of Biological Science and Technology, College of Biopharmaceutical and Food Sciences, China Medical University, Taichung 404, Taiwan, R.O.C.*

⁴*Department of Medicinal Botanicals and Health Applications, College of Biotechnology and Bio-resources, Da-Yeh University, 168 University Rd, Dacun, Chang-Hua, Taiwan, R.O.C.*

Background : *Polygonum orientale* has been used treat for various diseases such as arthritis, edema, dysentery, fractures, urticaria, and muscle injuries but there is no report about hepatoprotective effect. The aim of this study is to investigate the hepatoprotective activity of the ethanol extract of the fruit of *Polygonum orientale* (POE) prevent CCl₄ induced acute liver injury in mice.

Methods : Acute liver injury induced by carbon tetrachloride (CCl₄) (i.p.) in mice. Mice were randomly divided into six groups etch pretreated orally with POE (0.1, 0.5, and 1.0 g/kg) and silymarin (200 mg/kg) for five consecutive days before the administering of a single dose of 0.175% CCl₄ (10 ml/kg of bw, i.p.). Blood and liver were collected for biochemical, anti-oxidative activities, pro-inflammatory cytokines, and pathological microscopic analysis. Chemical profile by HPLC.

Redult : Pretreatment with POE (0.5 and 1.0 g/kg) showed a significant decrease the serum levels of AST, ALT, and ALP. Histological analyses also reduced the extent of liver lesions induced by CCl₄. Moreover, POE decreased the levels of malondialdehyde (MDA) and nitric oxide (NO) in the liver as compared to those in the CCl₄ group. Furthermore, POE (0.5 and 1.0 g/kg) enhanced the activities of anti-oxidative enzymes including SOD, GPx, and GRd. Moreover, POE (0.5 and 1.0 g/kg) decreased the levels of pro-inflammatory cytokines (TNF- α , IL-1 β , and IL-6) in liver. According to the HPLC analysis, we speculated the active constituents in POE were taxifolin, quercetin, acid and protocatechuic acid.

Conclusions : The hepatoprotective mechanisms of POE were likely associated with the anti-oxidative activity and anti-pro-inflammation.

P-41 *Scutellariae radix* and *Rhei rhizoma* formula alleviates chemical- induced liver fibrosis in a rat model

Tai-Long Pan, Pei-Wen Wang,

School of Traditional Chinese Medicine, Chang Gung University, Taoyuan, Taiwan

Background. Chinese medicine such as *Scutellariae radix* and *Rhei rhizoma* (SR), has been widely used to attenuate various liver diseases while the molecular mechanism remains to be explored.

Objectives. The current study applies functional proteomics to verify the antifibrotic efficacy of the herbal combinatorial formula (SRE) in a dimethylnitrosamine (DMN)-administered rat model.

Methods. Dimethylnitrosamine (DMN)-administrated rat model was applied to evaluate the anti-fibrotic effect of SRE in vivo. Histological analysis was then used to assess the cellular damage and efficacy of SRE upon the liver tissues. Two-dimensional electrophoresis (2-DE) coupled with MALDI-TOF mass spectrometry and network analysis were applied for the elucidation of molecular mechanisms by which SRE could reduce the DMN-induced hepatic fibrosis.

Results. Our data showed that the hepatic collagen content and alpha-smooth muscle actin expression were significantly abolished by SRE administration. In addition, the global protein changes and the network analysis suggested that SRE treatment could attenuate oxidative stress and cytoskeleton disturbance caused by DMN. Meanwhile, reduction of antioxidant enzymes induced by DMN exposure was restored in the presence of SRE. Protein carbonylation and DNA adduction due to oxidative modification were also inhibited under SRE administration, implying that SRE could effectively prevent hepatic fibrosis via modulating the redox status and associated signaling pathways.

Discussion. The current study elucidated a significant association between liver etiology and DMN. A comprehensive comparison of protein profiles with or without SRE treatment in the presentation of DMN showed that SRE could exert liver-protective function through its antioxidant characteristic, which successively maintains the stability of biological molecules including lipid, protein and DNA.

Conclusions. Taken together, our findings might shed light on developing novel therapeutic strategies against toxic chemical-caused liver fibrogenesis.

References Pan TL, Wang PW, Huang CH, Leu YL, Wu TH, Wu YR, You JS. Herbal formula. *Scutellariae radix* and *Rhei rhizoma* attenuate dimethylnitrosamine-induced liver fibrosis in a rat model. *Scientific Reports* | 5:11734 | DOI: 10.1038/srep11734.

Antroquinonol ameliorates alcoholic liver disease induced by chronic plus binge ethanol feeding in mice

Hsin-Yi Yang¹, Wan-Ju Yeh², Wen-Chih Huang^{3,4}, Wei-Hsiang Chuang², Jiun-Rong Chen²

¹*Department of Nutrition, I-Shou University,*

No.8, Yida Rd., Jiaosu Village, Yanchao District, Kaohsiung City, Taiwan 82445

²*Department of Nutrition and Health Sciences, Taipei Medical University,
250 Wuxing Street, Taipei City, Taiwan 110*

³*Department of Anatomic Pathology, Far Eastern Memorial Hospital,*

No.21, Sec. 2, Nanya S. Rd., Banciao District, New Taipei, Taiwan 220

⁴*College of Nursing, National Taipei University of Nursing and Health Sciences,
No.365, Mingte Road, Peitou District, Taipei City, Taiwan 112*

Background. Antroquinonol is an bioactive compound from *Antrodia Camphorata* which was reported to exhibit anti-inflammation effects and reduce lipid peroxidation in HpeG2 cell.

Objectives. The aim of the study was to investigate the effects of antroquinonol supplementation on alcoholic liver diseases in a NIAAA mouse model.

Methods. We divided the mice into 3 groups, including control (C), ethanol control (E) and antroquinonol group (A), and induced the mice to undergo alcoholic liver disease followed the NIAAA protocol by a 10-d chronic ethanol liquid diet and a single binge of 5g/kg ethanol at the end of the experiment. In the A group, we added 30mg/kg/day antroquinonol in the ethanol liquid diet. Nine hours after the single binge, we collected the blood and liver tissue of the mice for biochemical and histopathological analysis.

Results. We found no difference in body weight change and food intake among groups. The E group showed significant higher lipid, malondialdehyde (MDA) levels, and alanine aminotransferase (ALT) activity than the C group in plasma and liver tissue. The A group had lower plasma ALT and hepatic lipid, MDA and inflammatory cytokine levels than the E group.

Discussion. Chronic ethanol plus binge induce hepatic lipid accumulation, lipid peroxidation and inflammation, and antroquinonol supplementation ameliorated steatosis induced by ethanol while no effects on growth and appetite was found.

Conclusions. These results suggested that antroquinonol supplementation may ameliorate fatty liver and inflammation in alcoholic liver disease.

P-43

***Buddleja officinalis* MAXIM. flower extract prevents oxidative stress-mediated hepatic injury via AMPK activation**

Ji Yun Jung, Sang Mi Park, Kyung Hwan Jegal, Jae Kwang Kim, Il Je Cho, Sung Hui Byun, and Sang Chan Kim

Medical Research Center (MRC-GHF), College of Korean Medicine, Daegu Haany University, Gyeongsan 38610, Republic of Korea

Background. *Buddleja officinalis* is most important crude herbs used for treatment in traditional Oriental medicine. Arachidonic acid could produce excess reactive oxygen species and induce apoptosis and mitochondrial dysfunction. Moreover, Iron overload causes parenchymal cell injury and inflammation by oxidative stress in associated with mitochondria dysfunction.

Objectives. The present study investigated the cytoprotective effects and its mechanism of action of *B. officinalis* MAXIM. flower extract (BFE) against oxidative stress-mediated hepatocytes damage induced by arachidonic acid (AA) plus iron and *in vivo* experiment by using carbon tetrachloride (CCl₄)-acute liver injury model.

Methods. Hepatocyte cells were treated with 30 µg/ml BFE, and continuously incubated with 10uM AA for 12 h, followed by exposure to 5 uM iron. BFE, dissolved in water, was orally administered to rats at the dose of 30 or 100 mg/kg for 4 consecutive days.

Results. BFE protected HeG2 cells, from AA + iron induced cytotoxicity and decreased the apoptosis-related proteins expression. H₂O₂ production, mitochondrial dysfunction were significantly blocked by BFE pre-treatment. BFE increased phosphorylation of AMPK in time-dependent manner and blockage of BFE-mediated AMPK activation by compound C reversed the BFE's ability against to cell survival and mitochondrial protection. As expected, single injection of CCl₄ increased plasma ALT and AST levels in mouse. In addition, hepatocyte degeneration and inflammatory cell infiltration in liver tissue were all attenuated by BFE treatment. Moreover, nitrotyrosine- and 4-hydroxynonenal-positive cells, which represent oxidative stress in liver.

Discussion. BFE protected the cells from AA+iron-induced cytotoxicity, preventing the induction of mitochondrial dysfunction and apoptosis. In addition, BFE protected hepatocytes against AA+iron-induced oxidative stress through AMPK activation. BFE showed obvious hepatoprotective effects against CCl₄-induced acute hepatic damages at histopathological inspections, and also inhibited immunoreactivities or expression of NT and 4-HNE in hepatocytes.

Conclusions. BFE has the ability to protect cells from oxidative stress through AMPK activation, and suggest that BFE was herbal candidate for ameliorating a variety of oxidative stress-mediated hepatic injuries.

Sang Mi Park, Ji Yun Jung, Sung Hui Byun, Il Je Cho, Young Woo Kim, Sang Chan Kim,

Medical Research Center for Globalization of Herbal Formulation, College of Korean Medicine, Daegu Haany University, Gyeongsan, Gyeongsangbuk-do 712-715, Republic of Korea

Background. Isoliquiritigenin (isoLQ), an active component present in *Glycyrrhiza radix*, has been shown to have various biological activities including anti-inflammatory, anti-diabetic, anti-steatotic and anti-cancer effects. Although isoLQ has a hepatoprotective effect, the underlying mechanism is not clearly determined.

Objectives. This study investigated the effect of isoLQ against oxidative stress *in vivo* and *in vitro*, and its molecular mechanism.

Methods. The viability of HepG2 cells was measured by MTT assay. GSH content was monitored by measuring in cell homogenates and H₂O₂ production was determined by adding the DCFH-DA. Mitochondrial membrane potential was measured with rhodamine 123 by using a FACS flow cytometer. The levels of protein expression were analyzed by western blot. IsoLQ (5, 20 mg/kg, p.o., 4 days) dissolved in 40% PEG was administrated to rats. One hour after the last isoLQ administration, toxicant was induced by a single injection of cadmium (Cd; 4 mg/kg, i.v.) dissolved in saline to the rats.

Results. tBHP markedly induced cell death and oxidative damage in HepG2 cell line. However, pretreatment of 10 and 30 microM isoLQ significantly inhibited the induction of apoptosis and mitochondrial damage, and production of reactive oxygen species. Moreover, isoLQ induced activation of nuclear factor erythroid-2 related factor-2 (Nrf2), as indicated by increases in its nuclear translocation and antioxidant response element luciferase activity. IsoLQ also induced the expression of Nrf2 target phase II enzymes and phosphorylation of extracellular stimuli-regulated kinase (ERK), and its activation of Nrf2 was mediated with ERK-dependent phosphorylation of Nrf2. In rats, oral treatments of 5 and 20 mg/kg isoLQ prevented Cd-induced acute hepatic damages, as assessed by plasma parameters such as aspartate and alanine aminotransferase. The protective effects of isoLQ were also confirmed by semiquantative and histomorphometrical analysis such as the modified histological activity index grading scores and percentages of degenerative regions in hepatic parenchyma.

Discussion. In hepatocyte, isoLQ significantly protected cells against oxidative damage induced by tBHP. And isoLQ also has an effect on hepatic injury stimulated by Cd in rats. Moreover, we suggested the Nrf2 as a molecular target of isoLQ in the aspect of antioxidant effects in the liver.

Conclusions. These findings is considered as one of scientific evidence that isoLQ has a hepatoprotective effects against oxidative damages partly through ERK-mediated Nrf2 activation.

P-45

Effect of Goreisan on urinary concentrating ability and expression of aquaporins in Uninephrectomized rats

Michiko Jo¹, Mari Kimura¹, Naotoshi Shibahara¹

¹*Department of Kampo Diagnostics, Institute of Natural Medicine, University of Toyama, 2630 Sugitani, Toyama 930-0194, Japan.*

Background. AQPs play a central role in urine concentration, and changes in AQPs have a profound influence on water balance in the whole body, such as dehydration or overhydration to maintain serum osmolality. Goreisan has been widely used to treat edema. However, the influence of goreisan, a *Kampo* (traditional Chinese herbal medicine) formula, on AQPs expression in the kidney is unknown.

Objectives. The purpose of this study was to investigate the effect of goreisan on the urinary concentrating ability and the expression of aquaporin 1-4 (AQP1-4) in Uninephrectomized (UNx) rats.

Methods. One week after 1/2 nephrectomy, they had free access to tap water (sham) or tap water containing 1% NaCl for 4weeks. The rats were divided into three groups: 0.5% goreisan-treated, 1% goreisan-treated and controls. Additionally, each UNx group and sham-operated group (sham) was divided into 4 week-observed groups.

Results. The urinary osmolality and urinary sodium of goreisan-treatment for 4 weeks were significantly decreased compared with those of controls. AQP1-4 expression in the inner medulla, significantly increased compared with that in the NaCl groups. Furthermore, the expression of AQP2 and AQP3 in the goreisan-treated group in the cortex was significantly decreased compared with that in the NaCl groups.

Discussion. The changes in urinary osmolality, urinary sodium and the increase in AQP1-4 expression in the inner medulla and decrease in AQP2 and AQP3 expression by goreisan-treatment in NaCl rats suggest that AQPs expression is associated with the effects of goreisan on modulation of water balance.

Conclusions. We determined that goreisan-treatment for 4 weeks changed urinary osmolality and restored AQPs expression in kidney in UNx rats without causing renal dysfunction.

P-46

Inhibited effect of keishibukuryogan added with rhubarb (Rhei Rhizoma, Daio) on progression of renal dysfunction in 5/6 nephrectomized rat

Naotoshi Shibahara¹, Yukiko Nakatsuka¹, Michiko Jo¹, Mari Kimura¹, Maria Kaneko¹, Tatsuya Nogami², Makoto Fujimoto², Hiroaki Hikiami², Yutaka Shimada²

¹*Division of Kampo Diagnostics, Institute of Natural Medicine, University of Toyama, 2630 Sugitani, Toyama 930-0194, Japan*

²*Department of Japanese Oriental Medicine, Faculty of Medicine, University of Toyama, 2630 Sugitani, Toyama 930-0194, Japan*

Background. Renal fibrosis, characterized by glomerulosclerosis and tubulointerstitial fibrosis, is the final common manifestation of a wide variety of chronic kidney disease (CKD). Therefore, attenuating the progression of renal fibrosis may be one of ways to inhibit the progression of CKD. Various kampo formulations were also used for the treatment of CKD, and a number of studies have observed the effects of rhubarb (Daio; Rhei Rhizoma) or keishibukuryoganon (KBG; guì zhī fú líng wán) on Chronic Renal Failure model rats.

Objectives. The purpose of this study was to clarify the effects of Daio, KBG, and KBG added Daio on renal fibrosis in 5/6 nephrectomized (Nx) rats.

Methods. As markers of renal function, BUN, serum creatinine (sCrea), and uric protein (U-P) were measured. Tubulointerstitial fibrosis scores (TIS) was used for the histological analysis, and the protein expression of NF- κ B, TNF- α , TGF- β 1, MMP-9, type I, III collagen and fibronectin were evaluated by real-time PCR analysis and Western blot analysis. Periods for administration of drugs were 4 and 8 weeks.

Results. The results showed that Daio decreased BUN, sCrea, and U-P at 4 weeks, and decreased sCrea, and U-P at 8 weeks. KBG decreased BUN at 4 weeks, and decreased BUN and U-P at 8 weeks. KBG added Daio decreased BUN, sCrea, and U-P at 4 weeks, and decreased only sCrea, at 8 weeks. On TIS, although there was no significant change at 4 weeks, TIS was significantly decreased by KBG added Daio at 8 weeks. As for the markers of renal fibrosis, although Daio, KBG, and KBG added Daio suppressed the protein expression of collagen I, collagen III, TGF- β 1, mRNA expressions of collagen I and III were not changed and MMP-9 mRNA was increased at 4 weeks. At 8 weeks, there was no significant change in marker of renal fibrosis.

Discussion. The results of this study suggested that Daio and KBG had the improvement effect on renal dysfunction in Nx rat, and hypermetabolism of collagen I and III via the increase of MMP-9. On the other hand, KBG added Daio had the inhibitory effect on renal fibrosis, and the mechanism of this inhibitory effect was different from the inhibitory effect of KBG or Daio.

Conclusions. KBG added Daio had the inhibitory effect on renal fibrosis. The mechanism of this effect was not clear, and further elucidations are required.

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Protective effects of bromelain on doxorubicin-induced short- and long-term cardiac and renal dysfunction in rat model

Yueh-Chiao Yeh, Po-An Hu, Chia-Wen Tung, Yun-Hua Lin, Zhu-Xin Ke

*Department of Natural Biotechnology, Nanhua University, 55, Sec 1, Nanhua Rd.,
Dalin Township, Chiayi County, 62249, Taiwan, R.O.C.*

Background. The importance of doxorubicin (Dox), a widely-used antitumor antibiotic in the treatment of a variety of cancer diseases, is limited by its induced degenerative disorders in many organs, especially the heart and kidney. Bromelain (BL), a proteolytic enzyme extracted from the pineapple (*Ananas comosus*), has been used for its therapeutic actions in reducing inflammatory responses and preventing systemic diseases.

Objectives. The present study aimed at investigating the consequences of BL to protect from the Dox- induced short- and long-term toxicity to the rat heart and kidney.

Methods. Male Sprague-Dawley rats at 5-week of age administered with vehicle, Dox (3 mg/kg i.p. for three doses on days 5, 7, and 9), BL (5 mg/kg i.g. once a day on days 1 to 10), or BL plus Dox. At 10 (short-term) or 28 days (long-term), the left ventricular geometric and systolic parameter were measured by the transthoracic echocardiography and then the blood, bladder urine, heart and kidney were collected for further biochemical and histological analyses.

Results. Dox administration retarded the growth of the body and the heart as well as swollen kidney compared with the control groups at both days 10 and 28 after exposure, whereas BL pretreatment effectively neutralized the aforementioned gross effects of Dox. In terms of cardiovascular function, BL could significantly normalize and remodel the Dox-induced increased heart rate and systolic left ventricular function at both day 7 and 28. Significant histopathological changes were found in renal as well as cardiac tissues in Dox-administered short-term and long-term groups and, conversely, only the cardiac injuries induced by Dox were attenuated by BL pretreatment. BL pretreatment antagonized the Dox-induced acute decreased serum levels of total IgG and protein as well as elevated urine protein, but did not neutralize the Dox-induced long-term effects.

Discussion. Dox-induced acute inflammatory responses, heart failure, and renal dysfunction could be counteracted by BL supplement. BL could ameliorate the Dox-induced progressive chronic adverse effects in ventricular dysfunction and remodeling of heart, but did not significantly affect renal toxicity.

Conclusions. Our rat models provide strong evidence that BL supplementation would potentially protect against Dox-induced acute inflammation as well as renal and cardiac damages and ameliorate the chronic cardiotoxicities induced by Dox, hence it may imply for an adjuvant agent and serve as a beneficial complementary and alternative therapy in clinical practice.

Keywords: Bromelain, Doxorubicin, Heart, Kidney, Echocardiography, Histology

P-48

***p*-Hydroxyacetophenone inhibits the expression of NF- κ B in λ -carrageenan induced inflammation in mice**

Ching-We Chang^{1,2}, Yu-Chin Lin³, Wen-Huang Peng¹

¹*Department of Chinese Pharmaceutical Sciences and Chinese Medicine*

Resources, College of Biopharmaceutical and Food Sciences, China Medical University, Taichung, Taiwan

²*Department of Cosmetic Applications and Management, Mackay Junior College of Medicine, Nursing, and Management, Taipei, Taiwan*

³*Department of Biotechnology, College of Health Sciences, Transworld University, Yunlin, Taiwan*

Background.

The aim of this study was to investigate possible analgesic and anti-inflammatory mechanisms of the *p*-Hydroxyacetophenone (HPA).

Objectives.

This study hopes to find the analgesic and anti-inflammatory activities of HPA and provided evidence to support its therapeutic use in inflammatory diseases.

Methods.

The analgesic effect was determined using acetic acid-induced writhing response and formalin test. The anti-inflammatory activity was evaluated by λ -carrageenan-induced paw edema in mice.

Results.

The results showed that HAP decreased nociceptive pain, and also reduced the edema paw volume 4 to 5 hours after the λ -carrageenan injection. Furthermore, HAP significantly inhibited the NF- κ B activity that associated with expressions of COX-2 and iNOS, and the inflammatory response by decreasing the levels of the inflammatory mediators, such as IL-1 β , IL-6, TNF- α , and NO.

Discussion.

The anti-inflammatory mechanisms of *p*-HAP against λ -carrageenan induced paw edema involved some possible pathways.

Conclusions.

This study demonstrated possible mechanisms for the analgesic and anti-inflammatory effects of HAP, and provided evidence for the classical treatment of HAP in inflammatory diseases.

P-49**Development of a rapid identification compounds from *Angelica keiskei* Koidzumi (Ashitaba) with tyrosinase inhibitory activities by UPLC-MS/MS**

Jia-Hao Lee¹, Ching-Kuo Lee¹

¹*School of Pharmacy, Taipei Medical University, 250 Wuxing Street, Taipei City, Taiwan 110*

Background.

Angelica keiskei Koidzumi is a hardy perennial herb, growing mainly in Japan, Korea and Taiwan. Various chalcones on behalf of xanthoangelol and 4-hydroxyderricin, and coumarins like the xanthotoxin and laserpitin. Chalcones have been widely studied and presented to possess antioxidants, anticancer agents and inhibitors of α -glucosidases. Coumarins have been proved to have antioxidants, antidepressant, anticancer and acetylcholinesterase inhibitory effects.

Objectives.

Development a Rapid method, which can find the activity compounds with oxidation enzyme (tyrosinase) model and identify the compounds by UPLC-MS/MS.

Methods.

We used tyrosinase inhibitory assay to evaluate the stem, leaf and root of *Angelica keiskei* Koidzumi. First of all, via the UPLC-MS/MS to get total ion chromatography profiling. Afterward, used the statistics software to find the candidates. Finally, structural elucidation by UPLC-MS/MS product ion scan.

Results.

In enzyme inhibitory assay, we observed that presented the best inhibition by root crude. The inhibition rate in 1 mg/mL *Angelica keiskei* root crude is 27.04%, and in positive control (10 μ M kojic acid) is 30.37%. In addition, we found some different total ion chromatography peaks between the blank and test group in UPLC-MS/MS.

Discussion.

After the enzyme assay and UPLC-MS/MS analysis, we believe that some compounds must be reacted with tyrosinase. Furthermore, in the statistics result we find almost 20 different components between blank and test group in positive and negative mode, respectively. Recently, structural elucidation by UPLC-MS/MS product ion scan is going on.

Conclusions.

In this study, we success to development a method, that can rapidly find the activity compound in tyrosinase inhibition assay by UPLC-MS/MS analysis. This report took the advantages of the UPLC-MS/MS to obtain few material, low solvent used, rapid analysis. Through this method can find more candidates that have tyrosinase inhibition activity compared to the report before.

Anti-inflammatory effects of the fermentation extracts consisting of soybean, red ginseng and *Citrus Unshiu* Peel

Sook Jahr Park¹, Jong Rok Lee², Sung Hui Byun¹, Sang Chan Kim¹

¹*Medical Research Center for Globalization of Herbal Formulation, College of Korean Medicine, Daegu Haany University, Gyeongsan, Republic of Korea*

²*Department of Pharmaceutical Engineering, Daegu Haany University, Gyeongsan, Republic of Korea*

Background. Fermentation has been used to maximize absorption of the active components from herbs, as well as to increase their bioavailability. Fermented herbs are also helpful in improving the immune systems and protecting body against disease.

Objectives. The present study was conducted to evaluate anti-inflammatory effects of the fermentation extracts (FE) consisting of soybean, red ginseng and *Citrus Unshiu* Peel (9:1:16; w:w:w) in lipopolysaccharide (LPS)-activated Raw264.7 cells.

Methods. FE were prepared by the fermentation with *Bacillus Subtilis* and then by extraction with ethanol. Cell viability was measured by MTT assay. Nitric oxide (NO) production was measured in culture media by Griess assay. The expression of nuclear factor (NF)- κ B and inhibitory kappa B alpha (I κ B α) was determined by Western blot.

Results. LPS-induced production of NO and PGE₂ was dose-dependently decreased by the treatment of FE in Raw264.7 cells. These suppressive effects of FE on NO and PGE₂ production were related to the inhibition of inducible nitric oxide synthase (iNOS) and cyclooxygenase-2 (COX-2) expression. FE inhibited LPS-induced production of pro-inflammatory cytokines, TNF- α , IL-6, and IL-1 β in a dose-dependent manner. Furthermore, FE inhibited the NF- κ B signaling pathway through the prevention of LPS-induced degradation of I κ B α in cytosol and the nuclear translocation of NF- κ B. **Discussion.**

Soybean during the fermentation process is broken down into peptides or a number of amino acids which contribute to improve biological efficacy. In addition, red ginseng has been known to increase the human body absorption rate by switching ginseng saponins to low-molecular-weight material, such as compound K through fermentation. Anti-inflammatory effects of the FE is believed to be due to the metabolites increased or newly produced in the fermentation process. To give an understanding of the contribution of novel metabolites to anti-inflammatory activity of FE, further study should be conducted.

Conclusions. These findings suggest that FE could have anti-inflammatory effects on LPS-induced inflammatory responses in macrophages.

Effects of Shin'iseihaito (辛夷清肺湯) on allergic sinusitis induced by ovalbumin in mice

Toru Konishi¹, Masaaki Minami², Yuto Kubo¹, Zhixia Jiang³, Tetsuya Arai³, Toshiaki Makino¹

¹*Department of Pharmacognosy, Graduate School of Pharmaceutical Sciences, Nagoya City University, 3-1 Tanabe-Dori, Mizuho-ku, Nagoya, Japan*

²*Department of Bacteriology, Graduate School of Medical Sciences, Nagoya City University, 1 Kawasumi, Mizuho-ku, Nagoya, Japan*

³*R&D Center, Kobayashi Pharmaceutical Co., Ltd., 4-10 Doshomachi 4-chome, Chuo-ku, Osaka, Japan*

Background. Shin'iseihaito (辛夷清肺湯), a formula in traditional Japanese Kampo medicine comprising 9 crude drugs, Gypsum (石膏), Ophiopogon Tuber (麦門冬), Scutellaria Root (黄芩), Gardenia Fruit (山梔子), Anemarrhena Rhizome (知母), Lilium Bulb (百合), Magnolia Flower (辛夷), Loquat Leaf (枇杷葉), and Cimicifuga Rhizome (升麻), is commonly used to treat sinusitis.

Objectives. The objective of this study was to evaluate the effect of shin'iseihaito hot-water extract (SSHT) on allergic sinusitis induced by nasal sensitization using ovalbumin (OVA) as an antigen.

Methods. All crude drugs used is the grade of Japanese Pharmacopoeia 16th Edition. Allergic sinusitis mouse model was developed by intraperitoneal injection of OVA (2 µg/200 µL/mouse) suspended in alum solution (20 mg/mL) (day 0 and 7) and subsequent daily intranasal challenge of OVA (each 150 µg/each nostril, from day 14 to 28). In the SSHT-treated group, SSHT (20-times of human daily dosage) was daily administered to mice from day 13 to 28. On day 28, mice were sacrificed, and serum and nasal tissues were collected. Serum IgE level was measured by enzyme-linked immunosorbent assay. Nasal tissues were fixed, decalcified, embedded in paraffin, and dissected to prepare the section. In the histological evaluation, eosinophilic infiltration and epithelial thickness in sinonasal mucosa were examined by Luna straining and hematoxylin and eosin staining, respectively.

Results. By the treatment of OVA, serum IgE level, the number of eosinophils and epithelial thickness in nasal sinus mucosa were significantly increased to exhibit allergic sinusitis. In the group treated with SSHT, these symptoms were significantly improved.

Discussion. SSHT showed anti-allergic effects in mouse allergic sinusitis. Among 9 crude drugs composing SSHT, the extracts of Scutellaria Root, Gardenia Fruit, Anemarrhena Rhizome and Magnolia Flower have been reported to have anti-allergic effects. Now we are evaluating the effects of these crude drugs to find the active components to contribute the effectiveness of SSHT.

Conclusions. Shin'iseihaito suppresses the progression of allergic sinusitis induced by OVA. Shin'iseihaito may be useful drug to ameliorate and prevent allergic sinusitis.

Zerumbone enhances the Th1 response and ameliorates ovalbumin-induced Th2 responses and airway inflammation in mice

Ying-Hua Shieh¹, Huei-Mei Huang², Ching-Chiung Wang³, Chen-Chen Lee⁴, Chia-Kwung Fan⁵, Yueh-Lun Lee⁶

¹*Department of Family Medicine, Wan Fang Hospital, Taipei Medical University, Taipei, Taiwan;* ²*Graduate Institute of Medical Sciences, College of Medicine, Taipei Medical University, Taipei, Taiwan;* ³*School of Pharmacy, College of*

Pharmacy, Taipei Medical University, Taipei, Taiwan; ⁴*Department of Microbiology*

and Immunology, School of Medicine, China Medical University, Taichung, Taiwan; ⁵*Department of Parasitology, College of Medicine, Taipei Medical University, Taipei,*

Taiwan; ⁶*Department of Microbiology and Immunology, College of Medicine, Taipei*

Medical University, Taipei, Taiwan

Background. Zerumbone is a sesquiterpene compound isolated from the rhizome of wild ginger, *Zingiber zerumbet* Smith. The rhizomes of the plant are used as a spice and traditional medicine. Zerumbone was shown to possess anticarcinogenic, anti-inflammatory, and antioxidant properties.

Objectives. Herein, we investigated the immunomodulatory effects of zerumbone on antigen-presenting dendritic cells (DCs) *in vitro* and its potential therapeutic effects against ovalbumin (OVA)-induced T helper 2 (Th2)-mediated asthma in mice.

Methods. An allogeneic mixed lymphocyte reaction (MLR) assay was used to evaluate the effect of zerumbone on DC-mediated T-cell activation. In animal experiments, mice were sensitized and challenged with OVA, and were orally treated with different doses of zerumbone after sensitization. Circulating titers of OVA-specific antibodies, airway hyperresponsiveness to methacholine, histological changes in lung tissues, the cell composition and cytokine levels in bronchoalveolar lavage fluid, and cytokine profiles of spleen cells were assessed.

Results. In the presence of zerumbone, lipopolysaccharide-activated bone marrow-derived DCs enhanced T cell proliferation and Th1 cell polarization in an allogeneic MLR. Compared to OVA-induced hallmarks of asthma, oral administration of zerumbone induced lower OVA-specific immunoglobulin E (IgE) and higher IgG2a antibody production, attenuated airway hyperresponsiveness, prevented eosinophilic pulmonary infiltration, and ameliorated mucus hypersecretion.

Discussion and Conclusion. Taken together, these results suggest that zerumbone exhibits an antiallergic effect in an asthmatic mouse model.

Eriodictyol ameliorates lipopolysaccharide-induced acute lung injury in mice through reducing inflammation

Lin, Wang-Rong¹, Huang, Shyh-Shyun², Huang, Guan-Jhong¹

¹*Department of Chinese Pharmaceutical Sciences and Chinese Medicine Resources Institute, China Medical University, Taichung, Taiwan.*

²*Department of pharmacy institute, China Medical University, Taichung, Taiwan*

Background. Eriodictyol, which had proved to exhibit anti-oxidant, anti-inflammatory and anti-tumor properties. Acute lung injury (ALI) is a common clinical disease with a high mortality rate, and there are no effective treatment measures have been established. However, the therapeutic effects of Eriodictyol are still poorly understood on ALI

Objectives. Therefore, the aim of this study is to investigate the anti-inflammatory effects of Eriodictyol on lipopolysaccharide (LPS)-induced ALI mice model.

Methods. ICR mice were received a single intraperitoneally administered of Eriodictyol 1 hour before stimulated of LPS for 6 hours.

Results. The results showed that pre-treated mice with Eriodictyol could significantly decreased the contents of total cells and protein concentrations in broncho alveolar lavage fluid (BALF). Similarly, Eriodictyol inhibited the level of pro-inflammatory cytokines, including IL-6 and tumor necrosis factor- α (TNF- α) in BALF. In addition, Eriodictyol also markedly decreased on LPS-induced myeloperoxidase (MPO) activity in lung tissues. In summary, the findings of this study suggested that Eriodictyol could significantly attenuate LPS-induced ALI in mice via its anti-inflammatory effects.

Conclusions. These results indicate that Eriodictyol possibly as a potential therapeutic agent for ALI. Thus, further study to clarify the molecular mechanism of these beneficial effects by Eriodictyol is in the process.

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Ban Long Wan inhibits the LPS-induced inflammation in RAW264.7 cells and mouse models

Jui-Shu Chang^{1,2}, Shyh-Shyun Huang³, Jeng-Shyan Deng⁴, Guan-Jhong Huang⁵

¹*School of Chinese Medicine, Graduate Institute of Integrated Medicine College of Chinese Medicine, China Medical University, Taichung, Taiwan.*

²*Chang Jui Shu Chinese Medicine Clinic, Changhua, Taiwan.* ³*School of Pharmacy, College of Pharmacy, China Medical University, Taichung, Taiwan.* ⁴*Department of Health and Nutrition Biotechnology, Asia*

University, Taichung, Taiwan. ⁵*School of Chinese Pharmaceutical Sciences and Chinese Medicine Resources, College of Pharmacy, China Medical University, Taichung, Taiwan.*

Background. A standardized traditional Chinese medicine preparation named Ban- Long Wan (BLW) has been clinically used in treatments of tonify Kidney meridian and calm Spirit.

Objectives. This paper aims to investigate the *in vitro* and *in vivo* anti-inflammatory responses of BLW.

Methods. Anti-inflammatory effects of BLW were using lipopolysaccharide (LPS)- stimulated mouse macrophage (RAW264.7) in *vitro* and LPS-induced lung injury in *vivo*.

Results. BLW attenuated the production of LPS-induced nitric oxide (NO), tumor necrosis factor-alpha (TNF- α), interleukin-1 β (IL-1 β) and IL-6 in *vitro* and in *vivo*. We evidence that BLW was markedly reduced the LPS-induced histological alterations, myeloperoxidase (MPO) activity and enhanced antioxidant enzymes activity in the lung tissues by a 5 day pretreatment. Furthermore, BLW significantly reduced the number of total cells and the protein concentration levels in the BALF. Western blotting revealed that BLW blocked protein expression of inducible NO synthase (iNOS), cyclooxygenase-2 (COX-2), phosphorylation of I κ B- α protein and MAPKs in LPS-stimulated RAW 264.7 cells and LPS-induce lung injury was also blocked.

Discussion. This study suggests that BLW possesses anti-inflammatory effects in *vitro* and in *vivo*.

Conclusions. The results suggested that BLW was potential therapeutic targets for future clinical drugs. And its mechanisms were at least partially associated with downregulations of NF- κ B and MAPK pathways and the regulation of antioxidant enzymes activity.

Anti-inflammatory steroid from Phragmitis rhizoma modulates LPS-mediated signaling through inhibition of NF- κ B pathway

Jong Rok Lee¹, Moon Ki Park¹, Sook Jahr Park², Sang Chan Kim²

¹*Department of Pharmaceutical Engineering, Daegu Haany University, Gyeongsan, Republic of Korea*

²*Medical Research Center for Globalization of Herbal Formulation, College of Korean Medicine, Daegu Haany University, Gyeongsan, Republic of Korea*

Background. Phragmitis rhizoma has been traditionally used in treating fever and inflammation in Eastern Asia. However, the effect and mechanism of Phragmitis rhizoma on inflammation have been poorly studied.

Objectives. The present study was conducted to evaluate the anti-inflammatory effect of stigmasta-3,5-dien-7-one (ST) as a negative regulator of lipopolysaccharides (LPS)-induced inflammation in Raw264.7 macrophage cells.

Methods. ST was isolated from Phragmitis rhizoma using bioassay-guided purification. Raw264.7 cells were treated with ST for 1 h, and then stimulated with LPS or without for indicated time periods. The levels of nitric oxide (NO), prostaglandin E₂ (PGE₂) and pro-inflammatory cytokines were measured by Griess reagent method and enzyme-linked immunosorbent assay. Western blot analysis were conducted to evaluate the expression of proteins.

Results. ST effectively reduced NO, PGE₂, and pro-inflammatory cytokine levels, which were markedly raised by LPS treatment. In addition, ST blocked the nuclear factor-kappa B (NF- κ B) signaling pathway via down-regulation of phospho-p38 mitogen-activated protein kinase and phosphorylation and degradation of the inhibitor of NF- κ B α .

Discussion. In recent years, polymeric carbohydrates are receiving the attention as active components of Phragmitis rhizoma and common reed. However, ST has not been reported as a component of Phragmitis rhizoma. In the present study, we isolated ST responsible for the anti-inflammatory activity of Phragmitis rhizoma.

Conclusions. To our knowledge, this is the first study showing anti-inflammatory activities of ST isolated from Phragmitis rhizoma. Furthermore, these data supply the evidence of traditional use of Phragmitis rhizoma in heat-related syndromes.

Anti-hyaluronidase activity and immune response by tomato saponin, esculeoside A / esculeoside B

Jian-Rong Zhou, Takuya Shiraishi, Chiaki Tanaka, Toshihiro Nohara, Kazumi Yokomizo,

Faculty of Pharmaceutical Sciences, Sojo University, Kumamoto 860-0082, Japan

Background. Recently, there are increasing incidence of the atopic diseases such as atopic dermatitis, asthma and pollinosis.

Objectives. Our study has shown that the oral administration of tomato saponin, esculeoside A (EsA) / esculeoside B (EsB) to experimental dermatitis mice significantly reduced the skin clinical score without any detectable side effects. EsA, a spirosolane-type glycoside, is identified as a major content in the fresh ripe tomato *Solanum lycopersicum* L. fruits that is 4-fold higher than that of lycopene. And EsB, a solanocapsine-type glycoside, is identified as a major content in tomato juice and cans. However, it is still not known about the mechanisms including in the amelioration of experimental atopic dermatitis. Meanwhile, it has been reported the immunomodulation of tomatine, a major glycoalkaloid derived from the leaves and unripe fruits of tomato. We investigated the immune response and cytokine production by EsA / EsB in mice spleenocyte. Further, it has been known that during inflammation and tissue damage, hyaluronidase cleaves polysaccharide hyaluronan in low molecular weight hyaluronan fragments, which induce pro-inflammatory immune responses. Therefore, this study also tested the effects of EsA / EsB and their sapogenols esculeogenin A (Esg-A) / esculeogenin B (Esg-B) on hyaluronidase activity *in vitro*.

Methods. Anti-hyaluronidase activity *in vitro* was measured by a modified Morgan-Elson method. The immune response and cytokine production were measured by MTT and ELISA assay, respectively.

Results. Our present study provides the first evidence that anti-allergic chromoglycate, Esg-A / EsA (Esg-A equivalent) and Esg-B / EsB (Esg-B equivalent) dose-dependently inhibited hyaluronidase activity with IC_{50} of about 10 μ M, 2 μ M / 9 μ M and 100 μ M / 120 μ M, respectively. EsA / EsB dose-dependently inhibited ConA-elicited lymphocyte proliferation *in vitro*. And the oral administration of EsB showed a decreased tendency of IL-4 production and an increased tendency of IFN- γ production in experimental dermatitis mice.

Discussion. It is speculated that the inhibition of hyaluronidase activity may contribute to the alleviation of experimental dermatitis. EsA / EsB modulated lymphocyte proliferation and Th1 and Th2 cytokine profiles in experimental dermatitis mice. Future studies will be directed to investigate the detailed mechanism included.

Conclusions. It is believed that the daily intake of EsA / EsB from red tomato on atopic disease cases will be significantly meaningful for public health.

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Pharmacological effects of Pruni cortex (*Prunus jamasakura* Siebold ex Koidzumi) on inflammation induced by *Propionibacterium acnes*

Chiaki Murayama¹, Ching-Chiung Wang², Hisayoshi Norimoto¹,

¹Kampo Research Laboratories, Kracie Pharma Ltd., Kanebo machi 3-1, Takaoka City Toyama 933-0856, JAPAN. ²School of Pharmacy, College of Pharmacy, Taipei Medical University, 250 Wu-Hsing Street, Taipei 110, Taiwan, R.O.C.

Background. Topical preparations such as various gel, lotion and creams are commonly used to treat acne. However, most of topical treatments cause skin irritation that affects medicine adherence and outcome of treatment. On the other hand, Jumihaidokuto, a traditional Japanese formula is recently reported to be effective in the treatment of acne with a good adherence. Although its pharmacological mechanisms are few known, previous studies have suggested that Pruni cortex (a bark of *Prunus jamasakura* Siebold ex Koidzumi) as a typical component in the formula may involve in the actions on acne.

Objectives. To furthermore clarify the pharmacological effects of Pruni cortex, in this study, we examined its anti-inflammatory effects with a *Propionibacterium acnes* (*P. acnes*)-induced rat model. Moreover, those typical chemical constituents (sakuranetin, naringenin, genkwanin, genistein, arctigenin) of Pruni cortex were examined to find if they have anti-inflammatory activity against inflammatory mediator, nitric oxide (NO) with macrophage cell line.

Methods. 1) *P. acnes*-induced inflammation animal model was built in Wistar rats (9 weeks old, male) by treatment of the ears with intradermal injection of *P. acnes* (4McF, 20 μ l) or PBS (20 μ l) (as control) as well as water extract of Pruni cortex (60 mg/kg, *p.o.*) for 3 days. The thickness of ears were measured and used as index of inflammation for comparison. 2) Anti-inflammatory activity against NO was carried out in RAW 264.7 cells, namely, it was seeded in a 96-well culture plate using DMEM medium supplemented with 10% FBS cultured for 24 hr and then treated with test samples and heated *P. acnes* (HPA) or lipopolysaccharide (LPS) for 24 hr. The production of NO in the culture medium was determined by the Griess reaction.

Results. Pruni cortex significantly inhibited the ear thickness induced by *P. acnes*. Both Pruni cortex and the chemical constituents were suppressed NO production, in particular, sakuranetin showed significantly inhibitory activities against NO production induced by LPS and HPA with IC₅₀ values 16.9 μ M and 18.9 μ M, respectively.

Discussion. Although the pathological mechanisms of acne are not fully clear, inflammatory reaction induced by *P. acnes* has been considered to be a major factor. The results suggested that Pruni cortex and its chemical constituents should have anti-inflammatory effects through inhibiting NO production.

Conclusions. Pruni cortex may contribute mainly to the pharmacological effects of Jumihaidokuto.

P-58**Anti-osteoarthritis effects of 2, 3, 5, 4'-Tetrahydroxystilbene-2-O- β -D-glucoside from *Polygoni multiflora* in vitro and in vivo.**

Po-Wei Tsaï^{1,2}, Li-Geeng Chen³, Ching-Chiung Wang^{2,4}

¹Department of fashion design and styling, Fortune Institute of Technology. 288, Zhixue Rd., Kaohsiung City, TAIWAN 831, R.O.C.

²School of Pharmacy, Taipei Medical University. 250 Wuxing Street, Taipei City, TAIWAN 110, R.O.C.

³Department of Microbiology, Immunology and Biopharmaceuticals, National Chiayi University..300 Syuefu Rd., Chiayi City, TAIWAN 60004, R.O.C.

⁴Graduate Institute of Pharmacognosy, Taipei Medical University. 250 Wuxing Street, Taipei City, TAIWAN 110, R.O.C.

Background. *Polygoni multiflora* (PM) is a traditional herbal medicine which contained rich polyphenol compounds. 2, 3, 5, 4'-Tetrahydroxystilbene-2-O- β -D-glucoside (THSG), emodin and physcion are the major chemical constituents in PM. Pharmacological studies indicated THSG shows strong antioxidation and free radical scavenging properties, it also reduced hyperlipidemia, prevent lipid peroxidation, and protect the cardiovascular system.

Objectives. We would use IL-1 β induced-primary culture rat chondrocytes (PRC) inflammation and mono-iodoacetate (MIA)-induced osteoarthritis in rat model to explore anti-osteoarthritis effects of THSG. The results will offer the new application of PM in clinical.

Methods. 1. Sample preparation: Dried rhizomes of PM were sonicated with 60% methanol for two hours twice. The extract was subjected to diaion HP-20 gel column chromatography with 100% deionized water, 50% methanol in water, 100% methanol. And 50% methanol in water fraction was rechromatographed by LH-20 with 18% acetonitrile in water. The 18% acetonitrile in water eluted fractions contained THSG. 2. *In vitro* assay: the anti-inflammatory effects of extracts were evaluated in lipopolysaccharide (LPS) and IL-1 β induced RAW 264.7 cells and PRCs for investigating the inflammatory cytokines. 3. *In vivo* assay: the preventive ankle inflammatory by MIA-induced osteoarthritis in rat model.

Results. THSG, emodin and physcion were isolated from PM and THSG was richer in PM than emodin and physcion. Moreover, THSG specially accumulated in the epidermis of PM roots. MALDI-Imaging observed the PM roots, that the results showed the THSG contents in relation to its morphology. THSG could inhibit the NO and PGE₂ production from LPS-induced RAW 264.7 cells. *In vivo* assay, THSG could reduce paw edema and pain by MIA-induced rat osteoarthritis model. Therefore, we suggested THSG was major anti-osteoarthritis effects constituent in PM.

P-59 San'oshashito (TJ-113) improves postmenopausal ischemia reperfusion injury via its estrogenic effects.

Mayuko Sakanashi, Toshihiro Matsuzaki, Katsuhiko Noguchi, Junko Nakasone, Mika Kina, Haruaki Kubota, Yuji Taira, Makiko Sakanashi, Matao Sakanashi, Masato Tsutsui

Department of Pharmacology, Graduate School of Medicine, University of the Ryukyus, Okinawa, Japan

Background. The women's prevalence of ischemic heart disease significantly increases after menopause because of the loss of estrogen. The estrogen-deficient women are sometimes administered Kampo medicines, traditional Japanese herbal medicines, for the treatment of menopausal symptoms. San'oshashinto (code name: TJ-113) is one of the kampo medicines which is used to treat climacteric disorder.

Objectives. The purpose of this study is to clarify whether long-term treatment with a clinical dosage of TJ-113 ameliorates cardiac ischemia/reperfusion (I/R) injury in ovariectomized (OVX) rat as a menopause rat model.

Methods. OVX or sham-operated (sham) female rats were orally treated with 150 mg/day of TJ-113 or emodin, an ingredient of Rhei rhizoma, for 4 weeks. In some examination, fulvestrant, an estrogen receptor antagonist, was also applied subcutaneously once a week. The isolated and perfused heart was subjected to 30 min of ischemia and 60 min of reperfusion (I/R). Left ventricular samples were collected after I/R and used for the antioxidative analysis.

Results. As compared with sham rats, cardiac functions after I/R were significantly impaired in OVX rats, and TJ-113 markedly ameliorated these changes. Myocardial inducible nitric oxide synthase (iNOS) expression, superoxide production and peroxynitrite levels were significantly higher in OVX rats than in sham rats, whereas TJ-113 significantly reduced these oxidative changes. In contrast, myocardial manganese superoxide dismutase (Mn-SOD) activities were lower in OVX than in sham rats, but TJ-113 treatment significantly restored them. The cardioprotective effects of TJ-113 were significantly inhibited by fulvestrant. In addition, emodin, a phytoestrogen, improved I/R induced cardiac dysfunction.

Discussion. These results suggest that TJ-113 ameliorates cardiac I/R injury in OVX rats via inhibition of iNOS expression, suppression of peroxynitrite formation, and restoration of Mn-SOD activity. The beneficial effects of TJ-113 may be partially involved with the emodin's phytoestrogen-like effects.

Conclusions. TJ-113 may be a novel therapeutic option in the treatment of ischemic heart disease in climacteric women.

Regulation of *Helminthostachys zeylanica* (L.) Hook extracts in intestinal cytokine and anti-inflammatory effects during acute colitis

Li-Ching Chang¹, Ching-Wen Liu², Li-Wei Lin³, Fan-Shiu Tsai³, Chin-Chuan Tsai^{3,4}, Lung-Yuan Wu^{3,*}

¹*Department of Occupational Therapy, I-Shou University, No. 8, Yida Rd., Yanchao District, Kaohsiung 824, Taiwan, R.O.C.*

²*School of Pharmacy, Kaohsiung Medical University, Kaohsiung 807, Taiwan*

³*The School of Chinese Medicine for Post-Baccalaureate, I-Shou University, No.8, Yida Rd., Yanchao District, Kaohsiung 824, Taiwan, R.O.C.*

⁴*E-DA Hospital, No.1, Yida Rd., Yanchao District, Kaohsiung 824, Taiwan, R.O.C.*

Background. *Helminthostachys zeylanica* (L.) Hook (HZ). used to treat diarrhea and promotion of blood circulation.

Objectives. This study aims to investigate the effects and potential mechanism of HZ on dextran sulfate sodium (DSS)-induced acute colitis in mice.

Methods. Six week-old C57BL/6 mice were administered 3% dextran sodium sulfate in drinking water for five days. We observed an increased weight loss in B6 mice. We used B6 mice as control group (C), DSS group (DSS), HZ 0.1 group (0.1g /kg), HZ 1 group (1g /kg) and HZ 2 group (2g /kg). CD3+ protein expression was measured in the tissue using fluorescence immunohistochemistry (IHC). The levels of TLR4 and NF-κB were assessed using Western blot analysis, and levels of cytokine IL-6 and TNF-α were quantified by ELISA.

Results. DSS-induced mice exhibited lower body weight, shorter colonic length. The pathological results showed DSS produced acute colitis with inflammatory cells aggregation and mucosa necrosis, especially in certain sections of colon. HZ 2 group significantly inhibited lower body weight, shorter colonic length. IL-6 in colon was higher in DSS-induces mouse than HZ treatment group (p<0.05). TNF-α in serum was higher in DSS-induces mouse than HZ treatment group. HZ 2 group decreased the expression of NF-κB and TLR4 protein in colon. In addition, HZ 2-treated mice also demonstrated much less CD3(+) active T cell.

Conclusions. HZ may be used as a potentially novel for health care to improve the treatment of acute colitis.

Studies of *Punica granatum* on the radiation-induced biological damages *in vitro* and *in vivo* tests

Chia-Jung Lee¹, Aki Kanazawa², Masayoshi Saito², Takashi Uno², Ching-Chiung Wang^{1,3,4}

¹*Ph.D. Program for Clinical Drug Discovery of Chinese Herbal Medicine, College of Pharmacy, Taipei Medical University, 250 Wuxing Street, Taipei City 110, Taiwan*

²*Diagnostic Radiology and Radiation Oncology, Graduate School of Medicine, Chiba University, 1-8-1, Inohana, Chuo-ku, Chiba-shi, Chiba, 260-8670, Japan*

³*School of Pharmacy, College of Pharmacy, Taipei Medical University, 250 Wuxing Street, Taipei City 110, Taiwan*

⁴*Graduate Institute of Pharmacognosy, Taipei Medical University, 250 Wuxing Street, Taipei City 110, Taiwan*

Background. Ionizing radiation directly breaks down water in living cells into dangerously reactive free radicals causing a continual assault and attacking cell DNA and proteins. Therefore, radiotherapy is commonly used for tumor medications. A huge and unsolved problem of radiotherapy is ionizing radiation not only inhibit the tumor cell but also killing normal cells. Pomegranate (*Punica granatum* Linne) is widely used for traditional medicines. Pharmacological functions of pomegranate include anti-oxidation, anti-inflammation and anti-tumour. However, the protective effect of pomegranate against radiation-induced biological damage is still unknown.

Objectives. Purpose of this study is to explore the radioprotection of pomegranate and then discuss whether pomegranate will influence the radiotherapeutic effects.

Methods. *In vitro* study included mice lymphocytes proliferation and cytoprotection effect (AG1522 and MiaPaCa-2 cell lines) of pomegranate. *In vivo* ICR mice were used to evaluate the radioprotection of pomegranate against 8 Gy radiation exposures.

Results. *In vitro* results showed that treating pomegranate for 3 and 7 days could significantly stimulate mice lymphocytes proliferation. *In vivo* results displayed that co-treatment of pomegranate (100 mg/kg) significantly extends the survival rate of ICR mice with 8 Gy radiation exposures. However, the *in vitro* radioprotection of pomegranate in radiation-induced AG1522 cell is not significant. Refer to the radiotherapeutic effects, co-treatment of pomegranate (2.5-10 µg/ml) with radiation significantly and dose-dependently enhance the cytotoxicity effects of MiaPaCa-2 cell in a ³H-TdR incorporation experiment.

Discussion. This is the first study that pomegranate displayed the significant radioprotective effects.

Conclusions. Our results suggested that pomegranate could enhance immune functions, avoid the radiation-induced normal cell deaths and have synergistic effects with radiation against tumor cell growth in the radiotherapy process.

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A comparative preclinical pharmacokinetics of herbal ingredient following oral administration of single compound, single herb and multiple herbal formulation in rats

Tung-Hu Tsai^{1,2}

¹*Institute of Traditional Medicine, School of Medicine, National Yang-Ming University, 155, Li-Nong Street Section 2, Taipei 112, Taiwan*

Background. The Suan-Zao-Ren decoction (SZRD) is one of the most popular traditional Chinese medicine formulation for the treatment of restlessness, anxiety and insomnia. Our hypothesis is that the pharmacokinetics of single pure compound, single herbal extract and complex herbal formulation may provide different behavior of absorption, distribution, metabolism and excretion.

Objectives. The aim of this study was to develop an analytical system for the investigation of comparative preclinical pharmacokinetics between pure compound of the major active component, single herbal extract, and complex herbal formulation by determining bioavailability of the major herbal ingredient in each group following intravenous and oral administrations.

Methods. The novelty of the current study is in developing a freely moving rat model to provide a multi-dimensional pharmacokinetic comparison of mangiferin among four groups. Furthermore, based on the same equivalent dose of mangiferin, the herbal content of mangiferin in water crude extract of *Anemarrhenae Rhizoma* herbal and the extracts of SZRD have been calculated.

Results. The preclinical pharmacokinetic results demonstrated that the single herbal extract provides the greatest oral bioavailability and the lowest oral bioavailability is the single pure compound.

Discussion. The compositions of herbal formulations come from the wisdom of ancient people. Every formulation composition has its own pharmaceutical meaning as the herbs interact with each other to show remedial and healing effects. In our study, the results show that after oral administrations, single herb and herbal formulation show pharmacokinetic excellence over pure compound. This phenomenon may be due to herbal ingredient-ingredient or herb-herb interaction.

Conclusions. The conclusion reveals that these pharmacokinetic and bioavailability results provide a constructive contribution to demonstrate that herbal ingredient-ingredient or herb-herb combinations may create pharmacokinetic interaction.

Effect of Yin Qiao San against *Streptococcus pneumoniae* murine model by microarray analysis

Masaaki Minami¹, Toru Konishi², Toshiaki Makino²,

¹*Department of Bacteriology, Graduate School of Medical Sciences, Nagoya City University, Japan*

²*Department of Pharmacognosy, Graduate School of Pharmaceutical Sciences, Nagoya City University, Japan*

Background. Yin Qiao San (YQS; Lonicera and Forsythia Powder; 銀翹散), a formula of traditional Chinese medicine is commonly prescribed to treat respiratory tract infectious disease. Respiratory-tract infectious disease is usually caused by virus and bacteria such as *Streptococcus pneumoniae*. Many previous reports showed that YQS extract had anti-viral effect. Although some traditional crude drug has anti-bacterial effect, the effect of YQS extract against *Streptococcus pneumoniae* has been unclear

Objectives. In this study, we evaluated the effect of YQS extract against *Streptococcus pneumoniae* by microarray analysis.

Methods. All crude drug components of YQS were decocted and lyophilized to prepare the extract. We examined the effect of YQS extract against *Streptococcus pneumoniae* (ATCC49619) in 6 week-old female Balb/c mice. Bacteria were incubated with Todd Hewitt broth at 37°C under 5% carbon dioxide (CO₂) atmosphere. After one day, they were inoculated onto mouse. Then, YQS extract (10 mg/0.1 mL/10 g body weight (bw)/day, 20-fold of human dosage) was daily administered to mice on days -1, 0, 1, 2, and 3 after bacteria inoculation. After three days, all mice were sacrificed and lung were removed aseptically. The CFU in lung were count after one-day culture. Microarray analysis were performed Affymetrix GeneChip® Mouse Gene 2.0 ST Array by using this mouse lung RNA. The significant differences of data ratio were evaluated as over two fold and under a half fold. The analysis of gene ontology and annotation were also performed.

Results. The numbers of bacterial CFU in lung collected from the mice treated with YQS were significantly decreased compared with those from untreated mice. Microarray analysis revealed that the mRNA expressions of 35 gene expressions were upregulated and 32 gene expressions were downregulated in *Streptococcus*-infected mice treated with YQS compared to control mice. Upregulated genes included cytokine- and antimicrobial peptide-associated genes. Downregulated genes included heat shock protein- and immunoglobulin-associated genes.

Discussion. Our result showed that YQS activated cytokines and antimicrobial peptide pass way. It also repressed stress pass way such as heat shock protein and the production of Immunoglobulin pass way.

Conclusions. In this study, we propose that YQS has anti-*Streptococcus pneumoniae* disease that may be related to one of the action mechanisms of YQS to treat bacterial respiratory tractdisease.

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Adjunctive traditional Chinese medicine therapy improves survival of patients with pancreatic cancer in Taiwan: A nationwide population-based study.

Yi-Ting Kuo^{1,2}, Hou-Hsun Liao^{1,2}, Jen-Huai Chiang¹, Chia-Chou Yeh², Bor-Chyuan Chen², Ming-Hsien Yeh^{1,2}, Hung-Rong Yen¹

¹*School of Chinese Medicine, China Medical University, Taichung, Taiwan*

²*Department of Chinese Medicine, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Chiayi, Taiwan*

Background. Pancreatic cancer often has a poor prognosis, and some people in Taiwan take Chinese herbal products (CHPs) to treat the disease. However, there is a lack of investigations on prescription patterns and the advantage of CHPs for patients with pancreatic cancer.

Objectives. To survey the prescription patterns and advantage of CHPs for patients with pancreatic cancer in Taiwan.

Methods. We identified all patients with pancreatic cancer from 1997 to 2010 in Taiwan in the National Health Insurance Research Database (NHIRD). We investigated the frequency of use and the benefits of CHPs which were prescribed by TCM doctors for these patients. We also followed up the patients' survival status until the event of death.

Results. Our study showed there were 428 patients with pancreatic cancer took CHPs after being diagnosed as pancreatic cancer to treat their disease. We found out the five most common single herbs were *Herba Hedyotis Diffusae* (Bai-hua-she-she-ca), *Herba Scutellariae Barbatae* (Ban-zhi-lian), *Radix Salviae Miltiorrhizae* (Dan-shen), *Massa Medicata Fermentata* (Shen-qu), and *Radix Scutellariae* (Huang-qin). In addition, the five most common formulas Chinese herbal were Xiang-sha-liu-jun-zi-tang, Shen-ling-bai-zhu-san, Jia-wei-xia-yao-san, Gui-pi-tang and Ping-wei-san. According to the Cox hazard ratio model, we found out that CHP users had a lower hazard ratio of mortality risk.

Discussion. On the basis of our study and ancient literatures, the five most common single herbs possess activities of anti-cancer, enriching the blood, promoting blood circulation, tonifying spleen, cleaning heat and detoxification. On the other hand, the five most common herbal formulas also help to tonify spleen and enrich the blood. Therefore, this explains why the 428 patients with pancreatic cancer may have more physical strength and better constitution in the course of their disease.

Conclusions. In our study, we knew that the five most single herbs and the herbal formulas might have benefits to the survival status of patients with pancreatic cancer in Taiwan. We are continuing basic research and clinical trial to investigate the relationship between CHPs and pancreatic cancer.

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Anti-metastasis effects of Gilgyung-tang on human bladder cancer cell are related with suppressing MMP-2 and -9 expressions-an *in vitro* study

Su Hyun Hong¹, Yung Hyun Choi^{1,2}

¹*Department of Biochemistry, Dongeui University College of Oriental Medicine, Busan 614-052, Republic of Korea*

²*Anti-Aging Research Center & Blue-Bio Industry RIC, Dongeui University, Busan 614-714, Republic of Korea*

Background. Bladder cancer is the most common malignant tumor of the urinary tract. Despite our advanced knowledge for primary cancer development and progression, metastasis remains the leading cause of bladder cancer recurrence and death.

Objectives. Gilgyung-tang has been used as one of the main multi-herb formulas to treat “Ongjeo (abscess or carbunculosis)” reported in “Dongeuibogam”. In this study, we investigated the inhibitory effects of water extracts of Gilgyung-tang (GGT) on the cell migration and invasion, two critical cellular processes that are often deregulated during metastasis, in human bladder cancer 5637 cells.

Methods. To establish the adequate concentration, MTT assay was conducted. And then, to evaluate the inhibitory effects of GGT on the migration and invasion *in vitro* study, cell motility and wound healing assay, in vitro invasion assay, measurement of transepithelial electrical resistance (TER) assay. RNA extraction and reverse transcription-polymerase chain reaction and Western blotting were performed.

Results. GGT markedly inhibited the cell motility and invasiveness of 5637 cells in a concentration-dependent manner within the concentration range that was not cytotoxic. The inhibitory effects of GGT on cell invasiveness were associated with tightening of tight junctions (TJs), which was demonstrated by an increase in TER. RT-PCR and Western blotting results indicated that GGT decreased the levels of claudin proteins (claudin-3 and -4), major components of TJs that play a key role in control and selectivity of paracellular transport. GGT also inhibited the activity and expression of matrix metalloproteinase (MMP)-2 and -9, important mediators in cancer invasion, and simultaneously increased levels of tissue inhibitor of metalloproteinase (TIMP)-1 and -2.

Discussion. These data suggest that GGT reduces the migration and invasion of 5637 cells by modulating the activity of TJs and MMPs.

Conclusions. GGT might be a novel candidate material to prevent bladder cancer metastasis in achieving local tumor control. [This research was supported by Basic Science Research Program through the National Research Foundation of Korea grant funded by the Korea government (2013R1A1A2065537).]

P-67**Norcantharidin-induced apoptosis stress signaling: modulation of the Akt/FoxO4/Mcl-1 signaling cascade in prostate cancer cells.**

Yi-Hsien Hsieh^{1,2}, Chu-Liang Lin²

¹*Department of Biochemistry, School of Medicine, Chung Shan Medical University, Taichung, Taiwan.*

²*Institute of Biochemistry, Microbiology and Immunology, Chung Shan Medical University, Taichung, Taiwan.*

Background. Norcantharidin (NCTD) is the demethylated form of cantharidin, which is the active substance of mylabris, and is one of the ingredients of blister beetles which have been used in Chinese medicine for a long time. It has been used for the treatment of hepatoma, hepatitis, carcinomas of esophagus and gastric cardia, and leukopenia in various cancer cells

Objectives. The present study was based on the unexpected discovery that norcantharidin exerted anti-tumor activity when effects on growth and apoptosis of human prostate cancer cells were studied.

Methods. Cell proliferation, apoptosis, mitochondria dysfunction were examined by MTT, flow cytometry and JC-1 staining. Caspase-3, -8, -6, 7 and -9, PARP, Bcl-2 family proteins, FOXO4, and MAPKs pathways were studied by western blot. The phosphoinositide 3 kinase (PI3K) inhibitor LY294002, siAkt/siFOXO4 and overexpression-Akt/-FOXO4 were used to investigate the involvement of the PI3K/Akt/FOXO4 signaling pathway. In vivo studies were performed using PC3 cell xenografts in nude mice

Results. In this study, we found that Norcantharidin induced apoptosis of prostate cancer cells in a dose- and time-dependent manner, as evidenced by nuclear staining of DAPI, flow cytometry assay and Annexin-V/PI double-labeling. Norcantharidin triggered the activations of caspases-3, caspase-6, caspase-7 and caspase-9 and the cleavages of PARP, resulting in apoptosis induction. Norcantharidin also treatment resulted in the induction of apoptosis, which was associated with mitochondria dysfunction, upregulation of Bax, downregulation of Bcl-2, Bcl-xL and Mcl-1. Moreover, treatment of PC3 cells with Norcantharidin inhibited activation of the phosphorylation of Akt, and inhibition of Akt by LY294002 (PI3K inhibitor) or overexpression of HA-Akt significantly increased or abolished the Norcantharidin-induced apoptosis through activation of caspase and mitochondrion-related protein (Bcl-2 and Mcl-1) pathway. In addition, Norcantharidin not only downregulated the level of phospho-Akt but also enhanced the FOXO4 expression. The in vivo xenograft mice experiments revealed that Norcantharidin significantly reduced tumor growth in mice with PC3 tumor xenografts.

Conclusions. Taken together, our findings revealed that Norcantharidin is very potent to be an anticancer drug for human prostate cancer therapy.

Apoptotic cell death by Hwangheuksan, a traditional herbal formulation, in HCT116 human colorectal cancer cells: Roles of ROS generation and PI3K/Akt signaling pathway

Su Hyun Hong¹, Jin-Woo Jeong², Cheol Park³, and Yung Hyun Choi^{1,2*}

¹*Department of Biochemistry, Dongeui University College of Korean Medicine, Busan 614-052, Republic of Korea*

²*Anti-Aging Research Center & Blue-Bio Industry RIC, Dongeui University, Busan 614-714, Republic of Korea*

³*Department of Molecular Biology, College of Natural Sciences and Human Ecology, Dongeui University, Busan 614-714*

Background. Hwangheuksan (HHS) is a polyherbal formulation that has been used in traditional Korean medicine for hundreds of years to treat gastrointestinal malignancy. However, to date, the mechanisms responsible for the anti-cancer effects remain unclear.

Objectives. In this study, we investigate the anti-cancer effects of HHS using HCT116 human colorectal cancer (CRC) cells.

Methods. To check the inhibitory effect of HHS, MTT assay was conducted. Sub-G1 content and ROS detection were performed by cytometry. To evaluate the signaling pathway, RT-PCR and Western blotting were performed.

Results. HHS treatment significantly reduced cell survival and increased apoptotic cell death. The treatment of HCT116 cells with HHS also significantly elevated the accumulation of ROS, which was followed by the attenuation of the mitochondrial membrane through the upregulation of Bax and the downregulation of Bcl-2, which was accompanied by the release of cytochrome c to the cytosol. In addition, the HHS treatment caused the truncation of Bid and activated the caspases, DRs, the downregulation of anti-apoptotic protein family, and the degradation of PARP. Moreover, the HHS treatment inhibited the activation of PI3K/Akt signaling, and a pharmacological inhibitor of PI3K potentiated the apoptotic effects of HHS when employed in combination in HCT116 cells. Furthermore, the blocking of ROS generation by NAC attenuated the HHS-induced release of cytochrome c, and PI3K/Akt inactivation, thereby preventing HHS-induced apoptosis and reduction in cell viability.

Discussion. These findings suggest that HHS-induced ROS generation is required for caspase-dependent apoptotic cell death involving the inhibition of the PI3K/Akt signaling pathway.

Conclusions. Overall, our findings suggest that HHS may be an effective treatment for CRC cancer, and further studies are required to identify the active compounds in HHS. [This research was supported by Basic Science Research Program through the National Research Foundation of Korea grant funded by the Korea government(2015R1A2A2A01004633).]

Targeting colon cancer stem cell by anthraquinonol: Insight into mechanism and therapeutic target.

Cheng-Wei Lin^{#1}, Tzong-Huei Lee², Mei-Hsiang Lin³, Tzu-Hua Wu³

¹*Department of Biochemistry and Molecular Cell Biology, College of Medicine, Taipei Medical University, 250 Wu-Xing Street, Taipei, Taiwan*

²*Institute of Fisheries Science, National Taiwan University, Taipei, Taiwan*

³*Graduate Institute of Pharmacy, College of Pharmacy, Taipei Medical University*

Background.

Antrodia camphorata is a unique fungal parasite on *Cinnamomum kanehirae*, which specifically grow in Taiwan. *A. camphorata* has been used as traditional medicine for several diseases including liver diseases, food detoxification, hypertension, and cancer. We previously cultured mycelium of *A. camphorata* and isolated a ubiquinone derivative, Antroquinonol (ANQ). ANQ was reported to have anti-tumor activity on several cancers. However, the effect of ANQ towards colon cancer stem cell is still unclear.

Objectives.

Cancer stem cells possess the abilities in self-renew and drug resistance which limit the efficacy of chemotherapeutic drugs. We aimed to investigate the effect and molecular mechanism of ANQ on colon cancer stem cells.

Methods.

The colon cancer cell lines HCT116, HCT15, and LoVo were incubated with ANQ. Cell viability, tumor migration, invasion, and tumorsphere formation were evaluated. The mRNA and protein level of pluripotent genes expression were analyzed by real-time PCR and western blotting.

Results.

Treatment of ANQ significantly reduced cell viability, tumor migration/invasion, and tumorsphere formation in colon cancer cells. ANQ suppressed the mRNA and protein level of pluripotent genes expression, and downregulated beta-catenin/TCF signaling transduction. Moreover, suppression of PI3K/AKT by ANQ substantially inhibited beta-catenin/TCF activity, and diminished pluripotent genes expression. Molecular docking further revealed the potential binding site of ANQ with PI3K.

Discussion&Conclusions.

ANQ possesses the potential in anti-colon cancer stem cells through targeting PI3K/AKT/beta-catenin signaling pathway.

References.

Lee WT, Lee TH, Cheng CH, Chen KC, Chen YC, Lin CW. Antroquinonol from *Antrodia Camphorata* suppresses breast tumor migration/invasion through inhibiting ERK-AP-1- and AKT-NF-κB-dependent MMP-9 and epithelial-mesenchymal transition expressions. *Food Chem Toxicol.* 2015;78:33-41.

P-70 Knockdown of pentraxin 3 suppresses tumorigenicity and metastasis of human cervical cancer cells

Yong-Syuan Chen¹, Yi-Hsien Hsieh^{1,2}

¹*Institute of Biochemistry, Microbiology and Immunology, Chung Shan Medical University, Taichung, Taiwan*

²*Department of Biochemistry, School of Medicine, Chung Shan Medical University, Taichung, Taiwan*

Background:

Pentraxin-3 (PTX3) is a member of the pentraxin family of innate immune regulators. which implicated in angiogenesis, proliferation and immune escape in cancer.

Objectives:

The effects of PTX3 on the biological features of cervical cancer cells in vitro and in vivo.

Methods:

We analyzed PTX3 protein levels in human cervical cancer patients by Immunohistochemistry assay. Cell proliferation, cell cycle, migration and invasion were examined by MTT, flow cytometry in vitro migration and invasion assay. Cell cycle G2/M phase related proteins (cyclin B1, cdc2, cdc25c, p-cdc2, p-cdc25c, p21 and p27) and migration/invasion related protein (MMP-2, MMP-9, uPA) pathways were studied by western blot. *In vivo* tumorigenicity and *In vivo* lung metastasis studies were performed using SiHa cell xenografts in nude mice

Results:

Immunohistochemical staining showed that PTX3 expression increased expression was significantly associated with tumor grade ($P < 0.011$) and differentiation ($P < 0.019$). Knocking down PTX3 with lentivirus-mediated shRNA in cervical cancer cell lines resulted in inhibitions of cell viability, colony-forming ability and induced cell cycle arrest at G2/M phase, along with the downregulated expression of cyclin B1, cdc2, and cdc25c, and upregulated expression of p-cdc2, p-cdc25c, p21 and p27. In addition, knockdown of PTX3 significantly decrease the potential of migration and invasion of cervical cancer cells via inhibition of MMP-2, MMP-9 and uPA. Conversely, overexpression of PTX3 were increased their proliferation and invasion in vitro. Moreover, *In vivo* functional studies showed PTX3-knockdown suppressed tumorigenicity and lung metastatic potential in mice.

Conclusions:

Our results highlighted that PTX3 contributes to tumorigenesis and metastasis of human cervical cancer cells, it may be a novel potential biomarker for therapeutic strategy against human cervical cancer.

P-71 The cytotoxic effect and molecular mechanism of nonylphenol in human gastric cancer cells

Chun-Chi Kuo

Department of Nursing, Tzu Hui Institute of Technology, No.367, Sanmin Rd.

Nanjhou Hsian, Pingtung County, 926, Taiwan

Background.

Environmental chemicals may affect human health by disrupting endocrine function. Many endocrine disrupting chemicals (EDCs) are estrogen-like molecules that are classified as xenoestrogens (XEs). One XE, nonylphenol, is used as a surfactant or plasticizer and exhibits biotoxicity when accumulated in the body via the food chain. Some studies indicated that nonylphenol may enhance apoptosis, but the mechanisms remain unclear.

Objectives.

The aim of this project was to clarify the mechanisms of whether nonylphenol can induce apoptosis in human gastric cancer cell and if it can, what is the role of MAPKs and $[Ca^{2+}]_i$ involved in this mechanism.

Methods.

In this study, we investigated the effects of nonylphenol (10, 25, 50, 100, 200 μ M) induced apoptosis in gastric cancer cells. We also examined the protein expression by Western Blotting and the concentration of intracellular Ca^{2+} by spectrofluorophotometer.

Results.

Nonylphenol treatment was found to activate caspase-3 and mitogenactivated protein kinases (MAPKs), major markers in apoptotic pathways. Nonylphenol also activated the phosphorylation of extracellular signal-regulated kinase (ERK), c-Jun NH₂-terminal kinase (JNK), and p38 mitogen-activated protein kinase (p38 MAPK). However, only SB203580 (a p38MAPK inhibitor) partially inhibited nonylphenol-induced apoptosis. Nonylphenol induced a $[Ca^{2+}]_i$ rise by causing extracellular Ca^{2+} influx and intracellular Ca^{2+} release from the endoplasmic reticulum, and its effects on SCM1 cell death were prevented by pretreatment with the Ca^{2+} chelator BAPTA/AM.

Discussion.

These results suggest that nonylphenol caused apoptosis of tumor cells by a variety of mechanisms in SCM1 cells.

Conclusions.

In summary, the present study showed that nonylphenol caused Ca^{2+} -dependent apoptosis via the activation of p38 MAPK-associated caspase-3 in SCM1 cells

References This study was financially supported by Tzu Hui Institute of Technology (THIT104006).

P-72

Synergistic apoptotic effect of fisetin in combination with sorafenib in human cervical cancer HeLa cells through activation death receptor-5 mediated caspase-8/-3 and mitochondria-dependent apoptotic pathway

Chia-Liang Lin¹, Ya-Min Chang², Yi-Hsien Hsieh^{3, 4*}

¹*Institute of Biochemistry, Microbiology and Immunology, Chung Shan Medical University, Taichung, Taiwan*

²*School of Medical Laboratory and Biotechnology, Chung Shan Medical University, Taichung, Taiwan*

³*Department of Biochemistry, School of Medicine, Chung Shan Medical University, Taichung, Taiwan*

⁴*Clinical laboratory, Chung Shan Medical University Hospital, Taichung, Taiwan*

Background:

Fisetin has been reported to inhibit proliferation and induce apoptosis in various types of cancer. The combination of anti-tumor agents with bioactive compounds is a potential strategy for improving the efficacy of chemotherapy in cancer cells.

Objectives:

We expend this approach by demonstrating antitumor effect and molecular mechanisms for combination of fisetin with the clinically approved multi-kinase inhibitor sorafenib exhibited synergistic in vitro and in vivo against cervical cancer cells.

Methods:

The Cell viability assay was assessed using a MTT assay. Cell cycle distribution assay, Annexin V/PI staining assay and JC-1 together showed that combination of fisetin and sorafenib synergistically induced apoptosis. The western blotting data showed combination treatment of fisetin and sorafenib were further increased of apoptotic protein. HeLa xenograft model were performed that revealed that the combination treatment is clearly superior effect to sorafenib treatments.

Results:

We reported the combination of fisetin and sorafenib synergistically induced apoptotic in HeLa cells, which is accompanied by a marked increase in loss of mitochondrial membrane potential and apoptosis induction displayed by caspase-3, caspase-8 activation, increased ratio of Bax/Bcl-2 and subsequent cleavage of PARP. Additionally, combination of fisetin and sorafenib synergistically increased of DR5 expression. DR5 silencing by siRNA, the apoptotic effect of combination of fisetin and sorafenib on loss of mitochondrial membrane potential, cytochrome c release and caspase activity suppression. Finally, the in vivo studies revealed that the combination treatment is clearly superior effect to sorafenib treatments against the HeLa xenograft model.

Conclusions:

Our results suggest the combination of fisetin and sorafenib could be as a novel combination strategy especially for the treatment of cervical cancer.

Short-Hairpin RNA-mediated ESM-1 silencing promote human prostate cancer cell proliferation, migration and invasion.

Chu-Liang Lin¹, Yi-Hsien Hsieh²

¹ *Institute of Biochemistry and Biotechnology, College of Medicine, Chung Shan Medical University, Taichung, Taiwan,*

² *Department of Biochemistry, School of Medicine, Chung Shan Medical University, Taichung, Taiwan.*

Background. Endothelial cell-specific molecule-1 (ESM-1) is a secretory proteoglycan comprising a mature polypeptide of 165 amino acids and a single dermatan sulfate, and it has an important role in the regulation of cellular migration and invasion. However, the role for ESM-1 in prostate cancer remains unclear.

Objectives. The aim of this study was to evaluate the role of ESM-1 as an intracellular molecule in prostate cancers.

Methods. ESM-1 expression has been determined by Western blotting, qRT-PCR, and immunohistochemistry in the human prostate cell lines PC3, DU145, LNCaP, and 22Rv. Cell viability was examined by MTT assay and colony-formation, whereas cell motility was measured by migration and wound-healing assays, confirmed the matrix metalloproteinase-9 (MMP-9) and EMT marker protein expression in prostate cancer cells.

Results. ESM-1 protein and mRNA expression are higher in PC3 and DU145 cells than in LNCaP and 22Rv cells. In this study, we found ESM-1 knockdown in PC3 and DU145 cells promote cell proliferation, colony formation. Furthermore modulated cell cycle progression in PC3 and DU145 cells by up-regulating the expression of Cyclin D1, down-regulating the expression of p21 and p27 protein expressions. Knockdown of ESM-1 induced migration and invasion in prostate cancer cells, and up-regulation of MMP9 and regulation the EMTmarker. In addition, we used subcutaneous tumor models to study the effect of ESM-1 on the growth of PC3 cells in vivo.

Conclusions. These results suggest that knockdown of ESM-1 promote cell survival, migration, and invasion, cell cycle progression and modulated epithelial-mesenchymal transition (EMT) in prostate cancer cells. Furthermore, knockdown of ESM-1 also induces prostate tumor growth in nude mice.

The anti-metastasis effect of omega-3 fatty acids derivatives in prostate cancers.

Chiu-Li Kao¹, Yi-Ching Lo², Chung-Yi Chen³, Chi-Ming Liu^{1*}

¹*Department of Nursing, Tzu Hui Institute of Technology, No.367, Sanmin Rd.*

Nanjhou Hsian, Pingtung County, 926, Taiwan

²*Department of Pharmacology, College of Medicine, Kaohsiung Medical University, 100,Shih-Chuan 1stRoad,Kaohsiung,80708,Taiwan.*

³*School of Medical and Health Sciences, Fooyin University, 151 Jinxue Rd., Daliao Dist., Kaohsiung City 83102, Kaohsiung, Taiwan*

Background.

The prostate cancer is the leading death in the world. Omega-3 fatty acids (n-3 FAs) are proposed to have many beneficial effects on human health. The mechanisms of cancer preventative effects are unclear. TLR4 (Toll like receptor 4) has been shown to be highly expressed in prostate cancer cells and contributes to tumor cell survival and invasion.

Objectives.

In the present study, we evaluated the effect of omega-3 fatty acids derivate, LCM-1, on the proliferation and metastasis of human prostate cancer (PC-3) with lipopolysaccharide (LPS) in vitro.

Methods.

In this study, we investigated the effects of LCM-1 (25, 75, 100 µM) modulating of migration and proliferation of prostate cancer cells induced by LPS in PC3 cells for 24 hr. We also examined the protein expression by Western Blotting.

Results.

LCM-1 at high concentration can significantly inhibited PC3 cells growth with or without LPS (10 nM) induction for 24 hr by WST-1 assay. The migratory of PC-3 cells were evaluated using Wound Healing assay. LCM-1 administration decreased migration of PC-3 cells with or without LPS induction for 24 hr. The COX-2 (cyclooxygenase), MMP-9 (Matrix metalloproteinase), MMP-2 protein level decreased in PC-3 cells incubated with LCM-1 in the presence of LPS.

Discussion.

These results suggest that LCM-1 suppress proliferation and metastasis of tumor cells by a variety of mechanisms in PC3 cells.

Conclusions.

In summary, the present study showed that omega-3 fatty acids derivatives, LCM-1, decrease the migration of PC-3 prostate cancer cells. LCM-1 might prevent metastasis.

References This study was financially supported by Tzu Hui Institute of Technology (THIT104007).

Quercetin induced apoptosis of human oral cancer SAS cells through mitochondria and endoplasmic reticulum mediated signaling pathways

Yi-Shih Ma^{1,2}, Chien-Ning Yao³, Fu-Shun Yu⁴, Jing-Gung Chung^{3,5},

¹*Department of Chinese Medicine, E-Da Hospital, Kaohsiung, 82445, Taiwan*

²*School of Chinese Medicine for Post-Baccalaureate, I-Shou University, Kaohsiung 84001, Taiwan*

³*Department of Biological Science and Technology, China Medical University, Taichung, Taiwan*

⁴*School of Dentistry, China Medical University, Taichung 404, Taiwan*

⁵*Department of Biotechnology, Asia University, Wufeng, Taichung, Taiwan*

Background. Oral cancer is one of caused death in cancer-related diseases worldwide and the treatment of oral cancer with the integration of radiation, surgery and chemotherapy. Quercetin is one of components from natural plant products and it has been showed that quercetin induced cytotoxic effects through induction of cell apoptosis in many human cancer cell lines. However, there is no available information to show quercetin induce apoptosis in human oral cancer cells.

Objectives. In the present studies, we investigate the cytotoxic effects of quercetin on human oral cancer SAS cells in vitro.

Methods. We investigated the effect of quercetin on the cell death via the induction of apoptosis in SAS human oral cancer cells by using flow cytometry assay, DAPI staining, DNA gel electrophoresis, Annexin V/PI double staining, Western blotting and confocal laser microscopy examination, as a groups of test for cytotoxic effects at 6-48 h treatment.

Results. The cell death was increased when increased concentrations of quercetin based on the results from decreased viable cell number, increased DAPI staining, the occurrence of DNA ladder(DNA fragmentation), increased reactive oxygen species(ROS) and Ca^{2+} production, decreased the levels of mitochondrial membrane potential($\Delta\Psi\text{m}$), increased the apoptotic cell number and affect apoptotic associated protein expression in SAS cells. Western blotting results showed that quercetin increased the expressions of AIF and Endo G which also were confirmed by confocal microscopy examination that are associated with apoptosis pathways.

Discussion. In conclusion, affect the ratio of Bcl2/Bax imbalance which can lead to dysfunction of mitochondria(decreased the levels of $\Delta\Psi\text{m}$) and followed by the releases of AIF and Endo G then induced cell itself to enter into self-destruction by triggering apoptosis.

Conclusions. Based on those observations, we suggesting quercetin may be used as a novel anti-cancer agent for the treatment of oral cancer in future.

P-76 Inhibition of pentraxin 3 in glioma cells impairs proliferation and invasion in vitro and in vivo

Te-Fang Yang¹, Yi-Hsien Hsieh^{1,2}

¹*Institute of Biochemistry, Microbiology and Immunology, Chung Shan Medical University, Taichung, Taiwan*

²*Department of Biochemistry, School of Medicine, Chung Shan Medical University, Taichung, Taiwan*

Background:

Pentraxin 3 (PTX3) as an inflammatory molecule has been shown to be involved in immune response, inflammation and cancer. Recent evidence points to a critical role for the PTX3 in tumor progression.

Objectives:

The clinical expression of PTX3 in glioma patients and its function in glioma cancer progression remain unknown.

Methods:

The expression of PTX3 was measured using immunohistochemistry and western blotting in the human brain tumor tissue array and human glioma cell lines. The impact of PTX3 knockdown on GBM8401 cell growth was evaluated by MTT assay and flow cytometry. Cell migration and invasion were analyzed by cell-migration assay and Matrigel invasion assay. In addition, we used subcutaneous tumor models to study the effect of PTX3 on the growth of glioma cells in vivo

Results:

Immunohistochemical staining showed that PTX3 expression increased expression was significantly associated with tumor grade ($P < 0.001$). Knocking down PTX3 with lentivirus-mediated shRNA in GBM8401 cell lines resulted in inhibitions of cell viability and induced cell cycle arrest at G0/G1 phase. In addition, knockdown of PTX3 significantly decrease the potential of migration and invasion of GBM8401 cells via inhibition of MMP-1, MMP-2 and MMP-9 expression. Moreover, In vivo functional studies showed PTX3-knockdown suppressed tumorigenicity potential in mice

Conclusions:

These results indicate that PTX3 plays an important oncogenic role in the development and progression of glioma cells.

P-77***Morinda citrifolia* fruit water-EtOAc extracts induced apoptosis in human breast and liver cancer cells**

Hsiu Chen Huang¹, Cheng Huang², Yu-Xuan Wei¹, Man-Ching Shen¹

¹*Department of Applied Science, National Hsinchu University of Education, Hsinchu 30014, Taiwan, ROC*

²*National Research Institute of Chinese Medicine, Taipei 11221, Taiwan, ROC*

Background: *Morinda Citrifolia* have been used as complementary medicine. However, the chemical components of *Morinda Citrifolia* still have not been extensively examined and further studies on their bioactivities will be warranted.

Objectives: This study will evaluate the composition and biological potential of the *Morinda Citrifolia*.

Methods. The anticancer activity of *Morinda Citrifolia* were evaluated using MTT data, flow cytometry and Hoechst 33258 dye assay.

Results & Conclusions: The present study was undertaken to evaluate the cytotoxic activity of *Morinda citrifolia* fruit extract with different polarity solvents. The Water-EtOAc extracts of *Morinda citrifolia* fruit exhibited the highest decrease in Huh-7, Hep-G2, and MDA-MB-231 cell viability by increasing cell apoptosis. From the HPLC data, we reported here for the first time that chrysin were predominantly bioactive compound present in the Water-EtOAc extracts of *Morinda citrifolia* fruit. To determine the most active component of the Water-EtOAc extracts of *Morinda citrifolia* fruit, the cytotoxicity of chrysin pure compounds was examined. The experimental results show that chrysin combined with apigenin can reduce the HepG2 and MDA-MB-231 proliferation, cell motility and induce apoptosis. It also offers opportunities for exploring new drug targets, and further investigations are underway in this regard.

Naringenin inhibited migration of lung cancer cells via inhibition of MMP-2 and MMP-9

Yuh-Ming Chang^{1,2}, Shih-Chan Lai³, Ke-Min Chen³, Li-Sung Hsu^{1,4*}

¹*Institutes of Biochemistry and Biotechnology, Chung Shan Medical University, Taichung 40201, Taiwan*

²*Department of Neurology, Hsinchu Mackay Memorial Hospital, Hsinchu city 30071, Taiwan*

³*Department of Parasitology, Chung Shan Medical University, Taichung 40201, Taiwan* ⁴*Clinical Laboratory, Chung Shan Medical University Hospital, Taichung 40201, Taiwan*

**To whom correspondence should be addressed*

Background.

Lung cancer is among the most common causes of cancer-related deaths. It has a high mortality rate and resistance to chemotherapy because of high metastatic potential. Naringenin, a bioactive compound found in several fruits, displays anti-inflammation and anti-tumor effects. Naringenin mitigates the migration of several human cancer cells. However, the effects of naringenin on lung cancer remain unclear.

Objectives.

To investigate the effects of naringenin on the migration of lung cancer cells.

Methods.

Lung cancer cell A549 were treated with different naringenin concentrations. The effect of naringenin on the proliferation, migration, and MMP-2 / MMP-9 activities of lung cancer cells was determined. Total cell lysates obtained from cells treated with indicated concentration of naringenin for 48 h were also subjected to Western blot analysis to determine AKT activities.

Results.

No significant alteration in A549 cell proliferation was found in response to naringenin (0 to 300μM) treatment for 24 and 48 h. A dosage-dependent migration inhibition of A549 in the presence of naringenin was observed by healing and transwell migration assays. Zymography assay revealed that naringenin exhibited a concentration-dependent inhibition of MMP-2 and MMP-9 activities. Furthermore, naringenin also inhibited the activities of AKT in a dose-dependent manner.

Conclusions.

Our findings provided the first evidences that naringenin inhibited lung cancer migration via suppression of AKT activity and downregulation of MMP-2 and MMP-9.

P-79

Synthesis and 3D-QSAR model of Jolkinolide analogues

Ke Wang PhD^{1,2}, Juan-Cheng Yang PhD^{3,4}, Xiao-Ming Wu PhD^{1,2}, Da-Yong Zhang PhD,^{1,2*}, Yang-Chang Wu PhD^{3,4*}

¹Department of Medicinal Chemistry, China Pharmaceutical University, 24 Tongjia Xiang, Nanjing 210009, PR China

²Center for Drug Discovery, China Pharmaceutical University, 24 Tongjia Xiang, Nanjing 210009, PR China

³School of Pharmacy, College of Pharmacy, China Medical University, Taichung, Taiwan;

⁴Chinese Medicine Research and Development Center, China Medical University Hospital, Taichung, Taiwan

Background

Euphorbia fischeriana is a Traditional Chinese Medicine (TCM) for treating dampness toxin, swollen sores and abscesses. Recent reports highlighted their potential as potent remedies against several cancers. The functions of *Euphorbia fischeriana* have been extensively studied and can be linked to antitumor activity. Their antitumor activity was mainly attributed to the presence of abietane diterpenes, relationships remain largely unexplored.

Objectives.

We first described the total synthesis method and its anticancer activity for 3,19-dihydroxyjolkinolide and its derivatives.

Methods.

We synthesized more than 30 jolkinolide derivatives and established the 3D-QSAR model for its anticancer activity.

Results.

We showed that a series of *ent*-abietane diterpenes with potent anticancer activity were successfully synthesized. The derivatives, together with 19-hydroxyjolkinolides, were evaluated for their anticancer activity in NTUB1, T24, and J82 bladder cancer cells. Additionally, 3D-QSAR models, including CoMFA and CoMSIA, were established for elucidating the structure-activity relationships for jolkinolides.

Conclusions.

Taken together, we found that the most potent derivative, compound J33, is more active than jolkinolide B with a 40-fold cytotoxicity. This finding provides an important insight into the mode of jolkinolide-mediated anticancer activity and a new method for synthesizing 3,19-hydroxyjolkinolides.

A novel synthetic 7-arylindoline-1-benzenesulfonamides with anticancer activity in Colorectal cancer HCT116 cells

Tung-Yun Wu¹, Jing-Ping Liou², Mei-Chuan Chen^{1,3,*}

¹*Ph.D. Program of the Clinical drug discovery from Botanical Herbs*, ²*School of Pharmacy*, ³*Graduate Institute of Pharmacognosy, College of Pharmacy, Taipei Medical University, Taiwan.*

Background. Colorectal cancer ranks as the third cause of cancer deaths in Taiwan and the incidence rate of colorectal cancer is gradually increasing in recent years. In our study, we found that MPT0B220, a synthetic 7-aryloline-1-benzenesulfonamides compound, induces cell apoptotic cell death in colorectal cancer HCT116 cells.

Objectives. Here, we investigated the mechanism of action of MPT0B220-mediated apoptosis pathway in colorectal cancer HCT116 cells.

Methods. We examined MPT0B220-induced cell growth inhibition in human colorectal carcinoma HCT116 cells by using MTT (3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide) assay. Cell cycle distribution of MPT0B220-treated cells were evaluated by Flow cytometry. Protein markers of cell cycle regulatory factors and apoptotic cell death were examined by Western blotting.

Results. Compound MPT0B220 can inhibit cell growth in human colorectal carcinoma HCT116 cells with submicromolar IC₅₀ value (0.02 μ M) by using MTT assay. In addition, our results showed that MPT0B220 induced arrest of cell cycle at G2/M phase followed by an increase the proportion of sub-G1 cells by flow cytometric analysis with propidium iodide (IP) staining. MPT0B220 upregulated the mitotic makers phosphorylated MPM2 and cyclin B1 in parallel with increased phospho-cdc2 (Thr 161) and decreased phospho-cdc2 (Tyr 15). Apoptotic pathways were activated by showing catalytic cleavage of caspase -3,-9,-8 and poly (ADP-ribose) polymerase (PARP).

Discussion. Our findings show that MPT0B220 triggers both of caspase 8 and caspase 9 activation in HCT116 cells. It has been reported that caspase 8 and 9 can be involved in mitochondria-associated apoptotic cell death (MOLECULAR AND CELLULAR BIOLOGY, Aug. 2004, p. 6592–6607). In addition, our data has shown downregulation of bcl-2 and Mcl-1 expression level in response to drug treatment, suggesting MPT0B220-induced signal transduction may affect mitochondrial regulation. Therefore, we will investigate if mitochondria change plays an important role in MPT0B220-treated cells.

Conclusions. Our findings show that compound MPT0B220, a synthetic 7-arylindoline-1-benzenesulfonamides, can induce G2/M phase arrest and apoptotic cell death in colorectal cancer HCT116 cells. Taken together, MPT0B220 is a potential anticancer agent for colorectal cancer treatment and further development in the future.

P-81

Potential anti-cancer therapy in non-small cell lung cancer with traditional Chinese medicine Corex Mori and cisplatin

Ming-Wei Chao¹, Chin-Hung Lin¹, Chia-Yi Tseng², Lung-Yuan Wu^{3,*}

¹*Department of Bioscience Technology,*

²*Department of Biomedical Engineering, Chung Yuan Christian University, Zhongli district, Taoyuan city, Taiwan 320;*

^{3*}*I-Shou University, The School of Chinese Medicine for Post-Baccalaureate. Kaohsiung City 82445, Taiwan, R.O.C. Kaohsiung city*

Background. Many published studies have indicated that the growing application of complementary and alternative medicine, particularly traditional Chinese medicine (TCM) use in combination with conventional cancer therapy for advanced non-small cell lung cancer, but its efficacy remains largely unexplored. The purpose of this study is to evaluate the efficacy of TCM, Cortex Mori, combined with conventional chemotherapy in the treatment of non-small cell lung cancer.

Objectives. Studies on the constituents of the TCM, cortex mori (root bark of *Morus alba* L.) called as known as 'Sun Bai Pi (SBP)' have been recorded in books of traditional Chinese herbal medicines, which are used as an anti-phlogistic, a diuretic, an expectorant, and anti-hepatitis B activity.

Methods. And the study we used a non-small cell lung cancer cell A549 culture model system. SBP was extracted by hot water, followed by H₂O precipitation, reserve dialysis and protein depletion. Then, it was resuspended and added immediately at 5 and 10 mg/mL medium-diluted SBP extraction (SBPE) solution to the culture dishes. MTT assay was applied to detect viable cells after the SBPE treatment, which suggests SBPE cause cytotoxicity in a dose and time dependent manner.

Results. Our immunofluorescence results also indicate that autophagy marker LC3 was co-localized with lysosome marker LAMP-2 since 4 h after treatment, which reveals that SBPE is able to induce autophagy in A549 cell line. Next, we combined SBPE with conventional cisplatin in the chemotherapy. The results show that pre-treatment of SBPE for 6 h followed by the treatment of cisplatin for additional 24 h caused the most significant efficacy in killing A549 cells compared to SBPE free samples. The cytotoxic ratio increased from 40% to 75%. And the concentration of cisplatin used was reduced from 10 μ M to 5 μ M as well.

Conclusions. the combination therapy of SBPE decreases the dose and time of cisplatin used which may increase the efficacy of lung cancer therapy.

Beneficial effects of Xue-Fu-Zhu-Yu decoction on metabolic stress in APPswe/PS1dE9 mice.

Hui-Kang Liu¹, Huey Jen Tsay², Young-Ji Shiao¹

¹*Division of Basic Chinese Medicine, National Research Institute of Chinese Medicine, Ministry of Health and Welfare. No.155-1 Li-Nung street section 2, Taipei, Taiwan*

²*Institute of Neuroscience, Brain Research Center, National Yang-Ming University. No.155 Li-Nung street section 2, Taipei, Taiwan*

Background. Alzheimer's disease (AD) is characterized by excessive accumulation of β -amyloid (A β) and is the major form in Dementia. Brain insulin resistance occurs in AD and peripheral insulin resistance related diseases such as obesity and type 2 diabetes are regarded as risk factors for AD pathogenesis. In terms of syndrome differentiation in Traditional Chinese Medicine, stagnation of qi and blood stasis (氣滯血瘀) appears in both AD and diabetes. Combining both pathological conditions via introducing high fat diet and streptozotocin injection (HFSTZ) into APPswe/PS1dE9 mice, we were able to accelerate the pathogenesis of AD.

Objectives. Xue-Fu-Zhu-Yu (XFZY) decoction (血府逐瘀湯) is prescribed for purpose of removing blood stasis. In the current investigation, we intended to evaluate therapeutic effects on the metabolic stressed AD mice model.

Methods. Male APP/PS1 mice were introduced with HFSTZ condition at the age of 8 weeks. Once conditions of increased fasting blood sugar and glucose intolerance were confirmed, mice were divided into two groups and administrated with XFZY or vehicle for 8 weeks. At the end of administration, measuring plaque numbers in brain, HOMA-IR, serum amyloid beta, and body weight as well as fat and liver pathological examinations were carried out and compared.

Results. XFZY administration led to reducing plaque number in metabolic stressed APP/PS1 mouse brain. In addition, HOMA-IR and serum amyloid beta 42 were decreased. Body weight and hepatic triglyceride were both decreased in mice treated with XFZY.

Discussion. Our results indicate that administration of XFZY in metabolic stressed APP/PS1 mice could attenuate AD pathological conditions in brain, improve peripheral insulin resistance, and ameliorate hepatic steatosis. In addition, peripheral serum amyloid beta 42 is also significantly reduced. Although the underlying pharmacological mechanisms remain to be elucidated, attenuation of insulin resistance should play a positive role. Hyperinsulinemia has been considered to affect amyloid beta metabolism through interfering insulin degradation enzyme (IDE) to metabolize amyloid beta.

Conclusions. As a result, current investigation provides evidence of beneficial effects of XFZY on comorbidity of AD with T2D patients.

Search of the active effective crude drugs in goshajinkigan (牛車腎気丸) on muscle atrophy of the senescence-accelerated mice.

Tomoaki Ishida¹, Yuki Kishida², Keisuke Hagihara², Tomonori Abe³, Takeshi Nikawa³, Toshiaki Makino¹

¹Dept. of Pharmacognosy., Grad. School of Pharm. Sci., Nagoya City Univ., Nagoya, Japan. ²Dept. of Kampo Med., Osaka Univ. Grad. Sch. Med., Osaka, Japan. ³Dept of Nut. Physiol., Institute of Health Biosci., Tokushima Univ. Grad. Sch., Tokushima, Japan

Background. Sarcopenia is characterized by the reduction in the skeletal muscle mass and strength. That occurs with advancing age. In Japan, the number of the patients is increasing by the aging society. But, there is not effective treatment about that. In our previous study, we have found that goshajinkigan (牛車腎気丸, GJG), a Japanese traditional Kampo formula to treat *kidney deficiency* (腎虚) that is composed of 10 different crude drugs, can prevent the muscle atrophy of the senescence-accelerated prone mouse 8 (SAMP8).¹⁾

Objectives. We tried to isolate the effective crude drugs in GJG.

Methods. Nine week old male SAMP8 mice were divided into four groups, those fed a diet supplemented with 4%(w/w) GJG, hatimigan (八味丸, HG), rokumigan (六味丸, RG) or white potato starch(as controls). As normal controls, SAMR1 mice were fed a diet supplemented with 4% white potato starch. In another experiment, SAMP8 mice were fed a diet supplemented with GJG, that excluded the seed of *Plantago asiatica* (車前子, PA) or the root of *Achyranthes fauriei* (牛膝, AF), to accurate the effect of these crude drugs for preventing on muscle atrophy. At 16 weeks, the mice were euthanized and removed lower extremities. Those were stained with hematoxylin and eosin, and measured the area of muscle fiber by histological analysis. And, we measured serum level of IGF-1 (insulin like growth factor-1) and TNF- α (tumor necrosis factor- α).

Results and Discussion. The area of muscle fibers in the control mice was significantly less than that in normal control mice. However, we observed that muscle atrophy was strikingly alleviated in SAMP8 that fed by GJG. The serum level of IGF-1 was increased in SAMP8 that fed by GJG as compare with control mice. But that was not increased in SAMP8 that fed by HJG, GJG—PA and GJG—AF. The serum level of TNF α was decreased in SAMP8 that fed by GJG and GJG—PA as compare with control mice. But that was not decreased in SAMP8 that fed by HJG and GJG—AF. We thought that PA and AF increased IGF-1 level in serum, and AF decreased TNF- α level in that. PA and AF play an important part in the preventing muscle atrophy by that effect.

References. 1) Kishida Y., et al. *Phytomedicine* 22(1):16-22, 2015.

***In vitro* preventive effect of the extract of goshajinkigan (牛車腎気丸) on muscle atrophy and its active constituents**

Ke Ye¹, Tomoaki Ishida¹, Yuki Kishida², Keisuke Hagihara², Tomonori Abe³, Takeshi Nikawa³, Hidetoshi Hayashi⁴, Toshiaki Makino¹

¹Dept. Pharmacognosy, and ⁴Dept Cell Signaling, Grad. Sch. Pharm. Sci., Nagoya City Univ., Nagoya, Japan. ²Dept. Kampo Med., Osaka Univ. Grad. Sch. Med., Osaka, Japan. ³Dept Nutr. Physiol., Inst. Health Biosci., Tokushima Univ. Grad. Sch., Tokushima, Japan

Background. Sarcopenia is known as a syndrome of the loss of skeletal muscle mass and strength that occurs with advancing age, and the number of the patients are increasing by the aging society. In our previous study, we have found that goshajinkigan (牛車腎気丸), a Japanese traditional Kampo formula to treat *kidney deficiency* (腎虚) that is composed of 10 different crude drugs, can prevent the muscle atrophy of the senescence-accelerated prone mouse 8 (SAMP8).¹⁾

Objectives. We tried to isolate the effective crude drugs and ingredients contained in goshajinkigan.

Methods. We used dexamethasone and transforming growth factor (TGF)- β as inducible agents for muscle atrophy. Differentiated mouse C2C12 myotube cells was exposed to dexamethasone for 24hr and 8 hr, and then the expression of MuRF1 (muscle RING-finger protein-1) and SBE12 (Smad binding element) expressions were evaluated by luciferase assay, respectively. The extracts of goshajinkigan or its constitutive crude drugs were mixed with these inducible agents.

Results. Dexamethasone and TGF- β stimulated the expression of MuRF1 and SBE12 in C2C12 cells, respectively. The extract of goshajinkigan suppressed both dexamethasone-induced MuRF1 expression and TGF- β -induced SBE12 in concentration-dependent manners. Among the crude drugs contained in goshajinkigan, the extracts the processed root of *Aconitum carmichaelii* (加工附子), the seed of *Plantago asiatica* (車前子) and the rhizome of *Dioscorea japonica* (山薬) exhibited the suppressive effect on dexamethasone-induced MuRF1 expression, and the extracts of the bark of *Cinnamomum cassia* (桂皮) and the root bark of *Paeonia suffruticosa* (牡丹皮) suppressed TGF- β -induced SBE12 expression.

Discussion. Aging reduces skeletal muscle mass and strength, but the underlying mechanisms remain elusive. It is proved that MuRF1 and Smad family proteins are the key factors of sarcopenia. As expected from the previous *in vivo* results¹⁾, the extract of goshajinkigan suppressed the expressions of MuRF1 and Smad proteins *in vitro*, and 加工附子, 車前子, 山薬, 桂皮, and 牡丹皮 may be the active constituents prescribed in goshajinkigan formula. We will isolate the active compounds from these crude drugs near future.

References. 1) Kishida Y., et al. *Phytomedicine* 22(1):16-22, 2015.

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The putative mechanism of *Cynomorium songaricum* on preventing aging

Wei-Yong Lin^{1,2}, Jack Cheng², Chuan-Hsiu Liu³, Fuu-Jen Tsai^{2,3}, Hsin-Ping Liu⁴

¹Graduate Institute of Integrated Medicine, China Medical University, Taichung,

Taiwan, ²Department of Medical Research, China Medical University Hospital,

Taichung, Taiwan, ³School of Chinese Medicine, China Medical University, Taichung,

Taiwan, ⁴Graduate Institute of Acupuncture Science, China Medical University,

Taichung, Taiwan

Background. Aging has become the serious problems all over the world, because of the increasing aging population in different races. Aging refers to a series of time-dependent anatomical and physical changes that reduce physiological reserve and functional capacity.

Objectives. With the advent of the global aging society, so that the aging of health problems arising from social costs and will greatly increase the burden of health insurance benefits, so look for related genes associated with aging and slow down the aging symptoms. Memory degradation can be divided into two types; one is caused by the diseases, such as Parkinson's disease, Alzheimer's disease, Lewy body dementia, alcoholic brain lesions, etc. The other one is aging related, with increasing age, memory will slowly decline, but not because the disease caused by this memory degradation called "age-associated memory impairment, AAMI". With the extension of human life by the situation "age-related memory impairment," there is an increasing trend.

Methods. To elucidate the therapeutic effect of *Cynomorium songaricum* (CS) on preventing age-related health degradation in *Drosophila* animal model, transcriptomics and bioinformatics were applied.

Results. At organism level, average life-span of female, but not male, *Drosophila* was extended with CS treatment. At the molecular level, genes participating in Foxo and mTOR signaling pathways were regulated by CS treatment.

Conclusions. In conclusion, the differential gene profiling in Foxo and mTOR signaling between male and female *Drosophila* treated with CS may explain its differential effect on life span extension of male and female *Drosophila*.

Functional components analyses and assessments of water and ethanol extracts from Djulis sprouts

Jing-Bin Huang¹, Jhen-Yi Chen², Chien-Lin Chen¹, Tuzz-Ying Song¹

¹Department of Bioindustry Technology, Dayeh University, Changhua, Taiwan

²Taitung District Agricultural Research and Extension Station, Council of Agriculture, Executive Yuan

Background. Djulis (*Chenopodium formosanum* Koidz.) is known as *Chenopodium* plants. It is traditional crops of aboriginal that existed more than a century, and usually recognize the sprouts as an edible vegetable. For previous study, the content of total polyphenols and total flavonoids are richest in sprouts among different Djulis parts, and display the potent antioxidant activity. However, leafy vegetables often contain anti-nutrients such as phytic acid and oxalic acid, and it may inhibit nutrients absorption and leading kidney stone formation.

Objectives. The anti-oxidation, whitening and hypoglycemic effects as well as phytochemicals and anti-nutrients components of water and ethanol extracts of djulis sprout (sowing 30 days) were evaluated. By means of understanding of Djulis sprouts have the potential to develop health products in the future.

Methods. Sample preparation: The extracts were prepared by 100 g of Djulis sprouts in 2 L water (50°C and 95°C for 1 h) and ethanol (50% and 95% for 48 h), then the filtrates were freeze-dried into powder to obtained 50 and 95% ethanol extracts (ECFS-50; ECFS-95) and 50 and 95°C water extracts (WCFS-50, WCFS-95) of Djulis. Then the polyphenol, flavonoid, γ -aminobutyric acid (GABA), phytic acid and oxalic acid content in various extracts were determined. The functional assessment were evaluated by antioxidant activities (ABTS+ radical scavenging effects), whitening effects (inhibition of tyrosinase activity), and hypoglycemic effects (inhibition of α -glucosidase activity).

Results. The results show that total polyphenols and flavonoids contents in ECFS-50 were richest among the extracts (about 30 and 12 mg/g, respectively), GABA content was the most abundant in WCFS-50, WCFS-95 (about 183-199 μ g/g) which were equivalent to germination rice. Each extracts have approximately equivalent contents of Phytic acid (10-13 mg/g), and WCFL-95 has the highest amount of oxalic acid, approximately 400 mg/100 g. ECFC-50 displayed the potent antioxidant effect, the scavenging effects of ABTS+ radical was 77% under the concentration of 250 μ g/ml, and ECFL-95 was second (66%). We also found that ECFS-95 revealed the potent hypoglycemic and whitening effects (the inhibition were 67 and 71%, respectively, under the concentration of 1 mg/ml).

Discussion. Aqueous extracts of Djulis sprouts was rich in GABA, but it also contains high levels of oxalic acid, it was suggested that removing oxalic acid prior to development products. ECFS-50 shows the best ability to scavenge free radicals, it related with ECFS-50 contained more total polyphenols and flavonoids. ECFS-95 had potent hypoglycemic and whitening effects; however, the active ingredient of ECFS-95 should be further explored.

Conclusions. Aqueous extract of Djulis sprouts should be developed a functional drinks, and ethanol extract can be developed as a hypoglycemic health foods and whitening skin care products.

Screening of crude drugs used in Japanese traditional Kampo medicine that have inhibitory effect of organic anion transporting peptide (OATP)-2B1

Rie Iijima, Kan'ichiro Ishiuchi, Toshiaki Makino

*Department of Pharmacognosy, Graduate School of Pharmaceutical Sciences,
Nagoya City University, 3-1 Tanabe-Dori, Mizuho-ku, Nagoya, Japan*

Background. In modern medical systems, the opportunities to use both of Western medicine and traditional medicine at the same instant are increasing. It is well-known that grapefruit juice (GFJ) increased the absorption of the substrates of CYP3A4, and the causative compounds in GFJ are furanocoumarins. Recently, the another pharmacokinetic interaction of GFJ mediated by OATPs are noted, and the causative compounds in GFJ are flavonoid glycosides such as naringin. Flavonoid glycosides are popular constituents in medicinal herbs, and the possibilities of traditional medicines to cause drug interactions with Western medicines mediated by OATPs are concerned.

Objectives. The objective of this study was to evaluate the inhibitory effects of crude drugs used in traditional Japanese Kampo medicine in order to present drug information in clinics and pharmacies.

Methods. We subcloned OATP2B1, which transports some drugs like atorvastatin or fexofenadine at the apical side of intestinal epithelial cells, from cDNA library of human intestine, and constructed in pEBMulti vector. Using this vector, we developed OATP2B1-stably expressing HEK293 (HEK293-OATP2B1) cells. The hot water extract of representative 100 crude drugs used in Kampo medicine was prepared. The cells were incubated with [³H] estron-3-sulfate (E3S) for 10 min with or without the extracts (100 µg/ml), and the radioactivity incorporated into the cells were counted.

Results and Discussion. Uptake of E3S into HEK293-OATP2B1 cells was 6 – 10 fold higher than that into normal HEK293 cells, and the increased uptake was significantly inhibited by naringin in concentration dependent manners (IC₅₀, 9.4 µg/ml). Among 100 crude drugs, Arecae Semen (檳榔子), Aurantii Fructus Immaturus (枳實), Bambusae Caulis (竹筴), Cannabis Fructus (麻子仁), Eribotryae Folium (枇杷葉), Moutan Cortex (牡丹皮), Polygalae Radix (遠志), Polygoni Multiflori Radix (何首烏), Rhie Rhizoma (大黃), and Schterallia Radix (黃芩), exhibited less than 30% of control activity on OATP2B1 at the concentration of 100 µg/ml. Comparison of the activities between crude drug extract and GFJ, there is possibility that Kampo medicine containing these crude drugs might cause OATP2B1-mediated drug interaction in human. Among these crude drugs, we selected Moutan Cortex because it has not been reported to contain flavonoid glycosides. By the activity-guided fractionation of the extract of Moutan Cortex, we isolated pentagalloyl glucose.

Conclusions. Some crude drugs used in Kampo medicine may cause OATP2B1-mediated drug interaction when they are used together with Western medicine.

C study the effect of *Angelica sinensis* (Oliv) on cytochrome P450 in HepG2 cell line

Shih-Yin Chen^{1,2}, Pei-Chi Chou², Yu-Chuen Huang^{1,2}, Shih-Ping Liu³, Fuu-Jen Tsai^{1,2,4}

¹Genetics Center, Department of Medical Research, China Medical University Hospital, Taichung 404, Taiwan. ²School of Chinese Medicine, China Medical University, Taichung 404, Taiwan. ³Center for Neuropsychiatry, China Medical University Hospital, Taichung 404, Taiwan. ⁴Department of Medical Genetics, China Medical University Hospital, Taichung, Taiwan.

Angelica sinensis (Oliv.), it well known traditional Chinese medicines (TCM), has been used widely for the treatment of various types of disorders in China. It has been used to treat a variety of ailments including, dehydration, lumbago, hypertonia, nervous disorders, menopausal symptoms, neuralgia, angina, insomnia, and arthritis. Herb–drug interactions, especially cytochrome P450 (CYP 450)-mediated interactions, cause an enhancement or attenuation in the efficacy of co-administered drugs. In vivo studies with A. sinensis polysaccharides (ASP) showed that ASP increased P450 levels and activities of additional metabolic enzymes (e.g., NAPH-cytochrome C reductase). However, some results showed that male rats gavaged with aqueous and ethanol extracts of Dong quai had increased liver microsome protein content and decreased cytochrome P450 levels. Studies suggest that Dong quai may interfere or exacerbate effects produced by numerous drugs metabolism.

In this present studies, we identified the effect of DG on cytochrome P450s using the HepG2 cell line. And also analysis the interaction between CYP450s and pure compounds by ducking experiments. Our data suggested that the major compounds of DG via direct binding and regulating the expression of CYP450s. This study is valuable for the understanding the interaction between DG and CYP450, and it may be useful for the development of new therapeutic modality in the future.

A study on food cure for stomach diseases - Focusing on***Eumsunjungyo·Singnyojabyeong, Singnyochanyo***Jin-Im Hong*Dept. of Medicine Classics, College of Korean Medicine, Deajeon University,**Yongun-dong, Dong-gu, Daejeon, Korea*

Background. *Eumsunjungyo·Singnyojabyeong* (飲膳正要·食療者病) and *Singnyochanyo* (食療纂要) described the recipe and efficacy of food curing (食治). Thus, the study was performed on this book for its useful application in elderly, patients in the convalescent stage and people who are more concerned about their health.

Objectives. This study selected the food ingredients mainly appearing in the stomach-disease-related articles from *Eumsunjungyo·Singnyojabyeong* and *Singnyochanyo*, and investigated their effects to turn these data into references for modern people, use the food therapy of ancestors for modern life, and prevent and cure stomach diseases of modern people due to unhealthy lifestyle.

Methods. This study selected the stomach-related food therapies from *Eumsunjungyo* and *Singnyochanyo*, and organized the therapies by chief virtue, effect, ingredient, and recipe. Also, this study analyzed and investigated characteristics, tastes, and target organs of the food ingredients in the recipes.

Results. There are 8 stomach-related recipes among 61 recipes in *Eumsunjungyo·Singnyojabyeong*, and there are total 34 types of stomach-related recipes in *Singnyochanyo* including 27 types of BiwiBuBanui (脾胃 附反胃) Five and 7 types of Guto Bu Haeyeok Byeonggyeon Biwi (嘔吐附咳逆并見脾胃) fifteen. Both *Eumsunjungyo·Singnyojabyeong* and *Singnyochanyo* contains food therapies for diseases due to weak stomach. Most recipes in *Singnyochanyo* uses only food ingredients, whereas most recipes in *Eumsunjungyo·Singnyojabyeong* uses ingredients which can be used as medicine.

Discussion & Conclusions. The food therapies in *Eumsunjungyo·Singnyojabyeong* and *Singnyochanyo* proves that people in all regions have used food to cure diseases from old times. On the other words, people have clinically used the characteristics, tastes, and cooking forms of food ingredients for a long time. Thus, this study can be a reference for creating another food therapy.

A Study on analyzing the relationship of formulae with comparing its components (2)

Jang Heewon¹, Song Jichung², Eom Dongmyung¹

¹Wonkwang University, 460 Iksandae Rd., Iksan City, Cheonbuk, Korea.

²Daegu Haany University, 1 Haanydae Rd., Gyeongsan City, Gyeongbuk, Korea.

Background. In our former article, in order to identify the relationship of formulae, we select the five key factors of formulae - the source, the name of formula, the efficacy, the constituent herbs, and the amount of herbs - and compared the two formulae with these factors. There are 32 cases totally and we could classify them into 3 types ; Same formulae, Different formulae, Changed formulae. But we couldn't exactly divide Different formulae with Changed formulae in 10 cases.

Objectives. We tried to select more essential factors needed to analyze these 10 cases among the five key factors and identify how these 10 cases can be divided between Different formulae and Changed formulae by comparing these more essential factors. Finally, we tried to present the algorithm needed to analyze the relationship of the formulae in the ontology system for formulae

Methods. We selected the 3 factors including efficacy, constituent herbs and amount of herbs for analyzing the relationship of formulae more exactly. On the efficacy, we classified it as similar effect or different effect. On the constituent and amount of herbs, we classified it as the difference of mainly effected herb or supportively effected herb. And we investigated the example which is corresponded to each 10 cases and analyzed the relationship of formulae by comparing these 3 factors.

Results. Among the 10 cases, if the efficacy is same or similar, the cases that two formulae's constituent herbs and it's amount are different in mainly effected herbs are classified as Different formulae. But, the cases that constituent herbs and its amount are different in supportively effected herbs are classified as Changed formulae. If the efficacy is different, all cases are classified as Different formulae.

Discussion. On the cases which have different effect, we couldn't find the example of Changed formulae divided by the difference of supportively effected herb. As a result, all of the cases which have different effect are classified as Different formulae regardless of two formulae's constituent herbs and its amount.

Conclusions. The efficacy, constituent herbs and its amount are more essential factors to analyze the relationship of formulae. We can classified the 10 cases that confused in former article as Different formulae and Changed formulae by using the algorithm we suggested based on these 3 factors. So we suggest that we should consider this algorithm for construction of the ontology system for formulae.

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Comparison of Chrysanthemi Flos (菊花) derived from *Chrysanthemum morifolium* and *C. indicum* about the agonistic activity on PPAR γ and their active ingredients

Fuzi Zhang¹, Kanichiro Ishiuchi¹, Akinori Sugiyama³, Masahiro Ohsawa², Toshiaki Makino¹

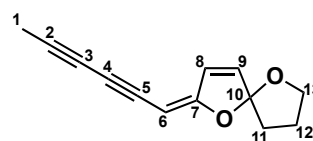
¹Dept. Pharmacog., and ²Dept. Neuropharmacol., Grad. Sch. Pharm. Sci., Nagoya City Univ., Nagoya, Japan

³Dept. Health Chem., Sch. Pharm., Iwate Med. Univ., Morioka, Japan

Background. The capitulum of *Chrysanthemum* species is a crude drug used in Japanese traditional Kampo and traditional Chinese medicine. Japanese Pharmacopoeia 16th Edition (JPXVI, 2011) determines that Chrysanthemi Flos (菊花) is the capitulum of *Chrysanthemum morifolium* or *C. indicum* (Compositae), however, Chinese Pharmacopoeia 2015 edition determines that the capitulum of *C. morifolium* is Chrysanthemi Flos (菊花) and that of *C. indicum* is Chrysanthemi Indici Flos (野菊花). In the previous study, the flower of *C. morifolium* is reported to promote adipocyte differentiation via peroxisome proliferator-activated receptor (PPAR)- γ activation¹⁾.

Objectives. We isolated the agonistic compound on PPAR- γ from Chrysanthemi Flos, and compared the activities among Japanese commercial samples including *C. morifolium* and *C. indicum* to find the high quality strains of Chrysanthemi Flos to prevent the diabetes.

Methods. PPAR- γ agonistic activity is measured using HEK293 cells dual-transfected with each of pCMV-SPORT-PPAR- γ vector and pGL4.26 PPRE5x48 by lipofection technique. By the activity-guided fractionation, the active compound was isolated from MeOH extract of the capitulum of *C. indicum*. We collected thirteen commercial samples of Chrysanthemi Flos in Japan, and measured the content of the active compound using HPLC, and PPAR- γ agonistic activity of the samples.



Results. We isolated 1,6-dioxaspiro[4.4]non-3-ene, 2-(2,4-hexadiynylidene)- (tonghaosu) from the capitulum of *C. indicum* as the active compound. The capitulum of *C. morifolium* did not contain this compound. Both the samples of the capitulum of *C. morifolium* and *C. indicum* have PPAR- γ agonistic activity, and the activities are not related to the contents of tonghaosu.

Discussion. Tonghaosu is one of the active compound in Chrysanthemi Flos that has PPAR- γ agonistic activity, but other major active ingredients would be existing.

References 1) Yamamoto J, et al. *Am. J. Chin. Med.* **43**, 255-267, 2015

The development of IPCD method - Quick and easy preparation method for decoctions of Kampo formula inspired by the method of boiling powdered crude drugs in the Song period of China -

Tsukasa Fueki^{1,2}, Toshiaki Makino³, Megumi Sumino⁴, Takanori Matsuoka^{2,5}, Masashi Beppu⁶, Koichiro Tanaka², Takao Namiki⁷

¹Matsuya Pharmacy, 2927-5 Maki-kou Nishikan-ku, Niigata, Niigata, 953-0041, Japan, ²Department of Traditional Medicine, Toho University school of medicine, 5-21-16 Omori Nishi, Ota-ku, Tokyo, 143-8540, Japan, ³Department of Pharmacognosy, Graduate School of Pharmaceutical Sciences, Nagoya City University, 3-1 Tanabe-Dori, Mizuho-ku, Nagoya, Aichi, 467-8603, Japan, ⁴Kashiwanoha Kampo Clinic, Chiba University, 6-2-1 Kashiwanoha, Kashiwa, Chiba, 277-0882, Japan, ⁵Public Interest Corporation Kenikai, 5-3-8 Ginza, Chuo-ku, Tokyo 104-0061, Japan, ⁶Center for Education Research in Medicine and Dentistry, Tokyo Medical and Dental University, 1-5-45 Yushima, Bunkyo-ku, Tokyo, 113-8510, Japan, ⁷Department of Japanese-Oriental (Kampo), Medicine, Graduate School of Medicine, Chiba University, 1-8-1 Inohana, Chuo-ku, Chiba, Chiba, 260-8670, Japan

Background. The formulation of a mixture of cut crude drugs for its decoction allows physicians to freely prescribe the best formula to patients. However, it forces the patients to spend 30-40 min of decoction, which would lead to poor adherence and make physicians to hesitate to use it.

Objectives. Inspired by a method in the Song period of China, we developed a new method to easily prepare Kampo decoctions, named IPCD (immersing powdered crude drugs) method. The optimum conditions and the extraction efficiencies on several crude drugs by IPCD method were investigated.

Methods. The crude drugs such as Ephedra herb, Scutellaria root, Perilla herb, Cinnamon bark and Kampo formulas of ogonto, ryokeikansoto, etc. were powdered, and then immersed in hot water to extract the ingredients under several conditions. The contents of marker compounds in the decoctions were measured and compared with those prepared by the conventional method of decoction.

Results. The amounts of transferred marker compounds reached a plateau within 4 min after the beginning of immersion of IPCD and the extraction efficiencies of IPCD on all the marker compounds measured in this study exceeded those of the conventional method of decoction for 30 min. The residue of powdered crude drugs was able to be removed by decantation with high yield of the immersion liquid.

Discussion. Using IPCD method, we could obtain the same or greater amounts of marker compounds transferred in the decoctions easily and in a much shorter time with lower consumption of crude drugs than with the conventional method of decoction. As IPCD doesn't require boiling process, it is especially suitable for the crude drugs with volatile compounds, such as Perilla herb.

Conclusions. IPCD method was proved to be a good choice for the easy, rapid and practical way of the preparations of Kampo decoctions, which enables physicians to select formulas freely and reduces the burden on patients for long time decoction.

Optimization of resveratrol derivatives production from peanut (*Arachis hypogaea* L.)

Lih-Geeng Chen¹, Shun-Xin Deng¹

¹*Department of Microbiology, Immunology and Biopharmaceuticals, National Chiayi University, 300 University Road, Chiayi 600, Taiwan*

Background. Phytoalexins are a kind of plant secondary metabolites which were induced by mechanical damage or microbial challenge of many plants. Resveratrol derivatives belong to phytoalexins are important for human with antifungal, antioxidative, cytotoxic for tumor cells, and anti-inflammatory activities. Seed of Peanut (*Arachis hypogaea* Linn., Leguminosae) contains abundance of isopentyl resveratrols, such as arachidins-1, 2, 3, and 3-isopentadienyl-4,3',5'-trihydroxy-stilbene (IPD) to combat fungal infection or physical damage.

Objectives. In present, four cultivar of peanut, Tainan selected 9, Tainan 11, Tainan 14, and black king-kong, were choice as experimental material. The aim of this study was to optimize the induced condition for isopentyl resveratrols from peanut.

Methods. The cotyledon was separated from different germination days of peanut. Cotyledon was cut into slice and exposed to moisture-saturated air for 36h to induce isopentyl resveratrols. The amounts of arachidin-1, arachidin-2, arachidin-3, and IPD in sliced peanut were measured by high-performance liquid chromatography.

Results. The total amount of isopentyl resveratrols of cotyledon were increased by the germination days in peanut. Arachidin-1 and IPD were the major compounds in these four peanut cultivars. Among four cultivar of peanut, Tainan 11 has the higher isopentyl resveratrols content (2.15 mg/ g dry material) and the black king-kong has the less isopentyl resveratrols content (1.45 mg/ g dry material) at days 4.

Discussion. Before cut-injury and moisture-saturated air exposed, cotyledon of peanut can't produce isopentyl resveratrols in different days. Different cultivar of peanut influenced the production of isopentyl resveratrols. Black king-Kong with the dark-violent seed coat display the high amount of anthocyanins, but it contains the less isopentyl resveratrols. It is interesting that resveratrol and anthocyanin has the same biosynthesis pathway. If plant produced high amount of anthocyanins, the other secondary metabolites may be inhibited.

Conclusions. The 4 days germinated cotyledon of peanut has the highest yields of resveratrol derivatives. Peanut cultivar of Tainan 14 is the best source for isopentyl resveratrols. The benefit of resveratrol derivatives reminded that after sliced and aeration treated peanut have a potential to be developed as nutrient supplement.

Comparative study on herbal extract formulations covered by the national health insurance in Korea, Japan, and Taiwan

Ching-Wen Huang¹, Yui Sasaki¹, Yu Lee Park¹, Bo-Hyoung Jang¹, Youme Ko¹, Chunhoo Cheo¹, Eun-kyoung Lee¹, Yong-Cheol Shin², Seong-Gyu Ko^{1,2}

¹*Institute of Safety, Efficacy and Effectiveness Evaluation for Korean Medicine, Kyung Hee University, 26 Kyungheedaero-ro, Dongdaemun-gu, Seoul, Korea*

²*Department of Preventive Medicine, College of Korean Medicine, Kyung Hee University, 26 Kyungheedaero-ro, Dongdaemun-gu, Seoul, Korea*

Background: Traditional medicine has been utilized for more than 2000 years in Korea, Japan, and Taiwan. Herbal medicine as well as acupuncture has been widely used in these countries. Thus, some of Herbal Extract Formulations (HEFs) has been covered by the national health insurance in all three countries; however, there are similarities and differences in the system across the countries.

Objectives: This study aims to analyze current status of HEFs covered by the national health insurance system and compare it across Korea, Japan, and Taiwan.

Methods: Data sources include national health insurance administration documents, herbal pharmacopeia, papers from pubmed and national standards on herbal medicine from the countries.

Results: The number of HEFs covered by the national health insurance is 56 in Korea, 148 in Japan, and 337 in Taiwan. There are common 24 HEFs covered by the national health insurance in all the countries. Out of the insurance-covered HEFs, the number of HEFs which are supervised in the pharmacopoeia also differs as follows: 56 in Korea, 24 in Japan, and 200 in Taiwan. There are common 10 HEFs which are both covered by the national insurance and supervised in the pharmacopoeia in three countries. The most frequently prescribed HEFs were Ojeogsan (五積散), Gunghatang (芎夏湯), and Ijintang (二陳湯) in order in Korea in 2014 and Jia-wei-xiao-yao-san (加味逍遙散), Shu-jing-huo-xue-tang (疏經活血湯) and Ge-gen-tang (葛根湯) in Taiwan, 2004. However, there is no official data on it in Japan. According to the statistics on monetary value of production and import of 91 HEFs which include HEFs not covered by the national insurance, Hochuekkito (補中益氣湯), Daikenchuto (大建中湯), and Saireito (紫苓湯) were top three HEFs in 2013.

Discussion: The number of HEFs supervised in the pharmacopeia is much less than that of HEFs covered by the insurance in Japan and Taiwan. The main reason seems to be that policy decisions have been made by several relevant organizations without coordination and cooperation among the organizations.

Conclusion: The number of HEFs covered by the national health insurance and supervised in the pharmacopoeia differs a lot across the countries. National standards and regulations on herbal medicine are essential for assurance of quality and safety. Therefore, based on more thorough study on history, legislation and current regulatory status of herbal medicine, benchmarking each other will be necessary.

Quantitative determination of ergosterol and ergosterol peroxide in silkworm *Cordyceps militaris* by thin layer chromatography

Lie-Chwen Lin^{1*}, Shih-Han Chen¹, Den- Jen Wu²

¹National Research Institute of Chinese Medicine, Ministry of Health and Welfare, Taiwan

²Miaoli District Agricultural Research and Extension Station, Council of Agriculture, Taiwan

Background. *Cordyceps militaris*, a kind of caterpillar fungus, is a precious Chinese medicine with a variety of pharmacological activities, like immunomodulatory, anti-cancer, and anti-diabetic effects. Because the limited of natural supply, the artificial cultivations are intent. Silkworm was often used as a host infected by fungus *Cordyceps militaris* during the artificial cultivation.

Objectives. Ergosterol is a sterol found in cell membranes of fungi. Ergosterol peroxide has been isolated from a variety of fungi and has been reported to exhibit immunosuppressive, anti-inflammatory, antiviral and antitumor activities in vitro. As above, ergosterol and ergosterol peroxide are two of the important ingredients of *Cordyceps militaris*. This study is aimed to evaluate the quality of silkworm *Cordyceps militaris* in ergosterol and ergosterol peroxide contents.

Methods. Nine *Cordyceps militaris* products from two cultivation methods were collected. Compounds ergosterol and ergosterol peroxide isolated from the methanol extract of *Cordyceps militaris* were used as standards. Then TLC quantitation of ergosterol and ergosterol peroxide in *Cordyceps militaris* was carried out in *n*-hexane/ethyl acetate solvent system.

Results. The concentrations of ergosterol and ergosterol peroxide in samples 1 ~ 5 derived from ecological mimic cultivation were 4.73 ~ 0.5 mg/g and 5.27 ~ 1.16 mg/g; and in samples 6 ~ 9 derived from solid phase fermentation were 1.19 ~ 0.27 mg/g and 1.40 ~ 0.93 mg/g, respectively. The results showed the *Cordyceps militaris* products derived from ecological mimic cultivation had good quality in ergosterol and ergosterol peroxide.

Discussion. Sample 5 is a complex of fruiting body and larvae, not the same with other samples 1 ~ 4 is a complex of fruiting body and pupa. The ratio of [ergosterol] / [ergosterol peroxide] in sample 5 was <1 and in samples 1 ~ 4 were ≥ 1 . Based on the above data, the ratio of [ergosterol] / [ergosterol peroxide] might be able to discriminate an original host of *Cordyceps militaris*.

Conclusions. The method is useful for the qualitative screening and quantitative determination of ergosterol and ergosterol peroxide found in *Cordyceps militaris* products.

The study of enhancement method for efficiency and objectivity discrimination of medical herb

Young-Sung Ju¹, Go-ya Choi², Guem-San Lee³, Jung-Hoon Kim⁴, Young-Sik Kim⁵,
Seung-Ho Lee²

¹*College of Korean Medicine, Woosuk University, Jeonju-si, Jeollabuk-do, Korea*

²*Korea Institute of Oriental Medicine, Daejeon 305-811, Korea*

³*College of Korean Medicine, Wonkwang University, Iksan, Jeonbuk, Korea*

⁴*Division of Pharmacology, School of Korean Medicine, Pusan National University, Yangsan, Gyeongnam 626-870, Korea.*

⁵*Department of Herbal Pharmacology, College of Korean Medicine, Kyung Hee University, Seoul 130-701, Korea*

Background. The limitation of medicinal herbs as natural materials causes problems of selecting the genuine medicinal herbs. 1. The problems of adulterations are caused from “genuine, substituted and imitated”, “superior and inferior”, “domestic and foreign” materials in distribution. 2. The official drug documents among the countries using medicinal herbs are confused by recording the different materials. **Objectives.** 1. Analyze the efficiency and objectivity of existing discrimination methods. 2. Prioritize the discrimination methods for medicinal herbs through these courses.

Methods. 1. Search and analyze the existing discrimination methods, such as sensory discernment, internal morphology, physicochemical(pattern analysis), biological and special method, of the country which uses medicinal herbs. 2. Analyze the efficiency and objectivity of analysis results. 3. Propose the more efficient and objective way for discrimination of medicinal herbs.

Results. 1. The existing discrimination methods are reasonable in theoretical perspective. 2. However, most of these are not effective in actual use. 3. 1) Ruling the priority of discriminating methods, it should be gradually orderd in objectification of sensory discernment, internal morphology, pattern analysis, biological method, special discrimination methods(gene identification, etc.). 2) The peculiarity of each medicinal herbs are not adhered to the mentioned order in distinguishing discrimination methods.

Discussion. 1. How can we differentiate discrimination methods for materials derived from plant, animal, mineral and medicinal preparation? 2. Find a way to choose a method for enhancing the objectivity and efficiency when discriminating the medicinal herbs.

Conclusions. 1. We should decide the order of discriminating methods based on the objectivity and efficiency for setting a ground rule to discriminate the medicinal herbs.

2. In case of peculiar medicinal herbs, we should choose the discriminating methods not to adhere a ground rule.

3. There should be an active intervention and cooperation of related country and organization.

The Turnover Rate of Baicalin, in *Scutellaria baicalensis* and Glycyrrizin, in *Glycyrrhiza uralensis* between 50% Ethanol and Hot Water Extract

Chia-Jung Lee¹, Chia-Jung Chang², Li-Geeng Chen³, Wen- Li Liang⁴, Ching-Chiung Wang^{1,2,4}

¹*Ph.D Program for the Clinical Drug Discovery from Botanical Herbs, Taipei Medical University, 250 Wuxing Street, Taipei City, TAIWAN 110, R.O.C.*

²*Graduate Institute of Pharmacognosy, Taipei Medical University, 250 Wuxing Street, Taipei City, TAIWAN 110, R.O.C.*

³*Department of Microbiology, Immunology and Biopharmaceuticals, National Chiayi University, 300 Syuefu Road, Chiayi City, TAIWAN 60004, R.O.C.*

⁴*School of Pharmacy, Taipei Medical University, 250 Wuxing Street, Taipei City, TAIWAN 110, R.O.C*

Background. *Scutellaria baicalensis* and *Glycyrrhiza uralensis* are the fundamental herbs used in traditional Chinese medicine (TCM) for the purposes of cognitive health and cardiovascular as well as longevity. According to Taiwan Herbal Pharmacopeia (THP), the substance marker of each herbal drug is prescribed. Such as, baicalin of *S. baicalensis*, and glycyrrhizin of *G. uralensis* whose specification recorded in THP is not less than 8 % and 2 % in raw herbs.

Objectives. In this study we used *S. baicalensis* and *G. uralensis* as a model material to explore the guidelines on how to define the substance marker in the material medica. And monitor these substance markers in the commercial extract product (CEP). In addition we would like to discuss how the substance marker transfers (Turnover rate) from raw material to decoction.

Methods. Different raw materials of *S. baicalensis* and *G. uralensis* were collected and measured the turnover rate of baicalin and glycyrrhizin from raw material to decoction. Qualities of different CEPs are also analyzed. In sample preparations, 50% EtOH (volume-per-weight) is used to extract the total content and 20-fold boiling water extraction until the half volume is performed as decoction. After that, the baicalin and glycyrrhizin content were determined using HPLC analysis. All the analysis conditions, such as extraction condition, HPLC analysis method and turnover rate calculation, are based on the THP regulations.

Results. Base on the THP baicalin in *S. baicalensis*, is not less than 8 % and we collected 5 different raw materials and all were qualified. And the turnover rate of baicalin was found to be 10.13% to 13.14% from raw material to decoction. We also found that glycyrrhizin in *G. uralensis* was not less than 2% and the turn-over rate is 28.96% to 53.54%. The turnover rate of glycyrrhizin was dose related with the content of raw material ($r^2=0.9015$). According to above results, we suggested that the qualification for the content of substance marker in the medical material be based on the highest turn-over rate.

Jerome G. Ganzon¹, Lih-Geeng Chen², Ching-Chiung Wang¹,

¹*School of Pharmacy, College of Pharmacy, Taipei Medical University, 250 Wu-Hsing Street, Taipei City, Taiwan, R.O.C.*

²*Department of Microbiology, Immunology and Biopharmaceuticals, National Chiayi University, 300 University Road, Chiayi, Taiwan, R.O.C.*

Background. Leaves of mulberry tree (*Morus alba* L.) has been widely used as traditional medicine for the treatment of exogenous wind heat which is manifested clinically in the form of headache, cough and sore throat. Lately, pharmacological researches prove its anti-diabetic, antimicrobial, anti-inflammatory and antioxidant properties because of its high polyphenol content. As a medicinal material in China, the leaves are collected only after frost. Due to the increasing demand for this raw material, an effective method to help producers address their Good Agricultural and Collection Practices requirements to assure quality and effectiveness of their harvest products shall be needed.

Objectives. The present work aims to identify potential chemical markers for the antioxidant property of *M. alba* L. leaves. And also to determine the best harvest time which provides most of these bioactive compounds. In relation to it, we also intend to validate and provide evidence based claim on the traditional practice of raw material collection. This method shall not only ensure the quality but also the sustainability of the material source.

Methods. We carried out a bioassay guided isolation of the antioxidant principles of mulberry leaves. Leaves samples were collected in a period of one year at different locations from a branch and classified according to their relative age. The bioactive compounds were isolated from the aqueous methanolic extract by reverse-phase chromatography. And the antioxidant properties were determined using DPPH assay. The isolated compounds will be monitored in the quality control samples collected for 12 months using a fingerprint profile generated using 1%-20%acetonitrile in 0.05%trifluoroacetic acid at 280nm for 65 minutes.

Results. The compounds isolated from *M. alba* L. leaves are 5-O-caffeoylquinic acid(**1**), 4-O-caffeoylquinic acid(**2**), gastrodin(**3**) and isoquercetin(**4**). Compounds **2** and **4** showed highest free radical scavenging with comparable IC₅₀ values of 11.37µg/mL and 10.57µg/mL respectively. Meanwhile, compound **2** showed predominant increased in content during the collection month of January while compounds **1**, **3** and **4** were observed to be relative equally distributed throughout the year.

Conclusions. Our study showed that compounds **2** and **4** exhibit strong antioxidant activities. And that January is the best month to harvest mulberry leaves since it contains the highest concentration of compound **2**. These suggest that mulberry leaves is a rich source of antioxidant compounds which can be used not only for therapeutic purposes but can be developed as a functional food.

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The quality of chenpi depends on the processing of air dried time

Ya-Chieh Tsai¹, Chia-Jung Lee², Li-Geeng Chen³, Ching-Chiung Wang^{1,2,4}

¹Graduate Institute of Pharmacognosy, Taipei Medical University. 250 Wuxing Street, Taipei City, TAIWAN 110, R.O.C.

²Ph.D Program for the Clinical Drug Discovery from Botanical Herbs. 250 Wuxing Street, Taipei City, TAIWAN 110, R.O.C.

³Department of Microbiology, Immunology and Biopharmaceuticals, National Chiayi University. NO.300 Syuefu Rd., Chiayi City, TAIWAN 60004, R.O.C.

⁴School of Pharmacy, Taipei Medical University. 250 Wuxing Street, Taipei City, TAIWAN 110, R.O.C

Background. Chenpi is from the pericarp of *Citrus reticulata* Blanco, family Rutaceae. The medicinal material of Chenpi is mainly produced in the area of Sunwui, Guangdong, China. Its action is regulate qi and harmonize the spleen and stomach, eliminate dampness and resolve phlegm. However, Chenpi must be stored over one year in order to use, according to Compendium of Materia Medica (本草綱目), the longer the storage time of Chenpi is better quality it has compared to a shorter storage one.

Objectives. We would like to explore how the storage time of Chenpi would influence its quality. Therefore, the different storage time were collected from same company in Sunwui. Furthermore, by using photochemical content and bioactivity analysis to measure which storage years of Chenpi could produce the best quality.

Methods. Sample preparation: The 9 kind of Chenpi, which was stored for 7, 10, 13, 15, 20, 26, 30, 35 and 40 years, and collected from the same company. Photochemical content analysis: Folin-Ciocalteu method to measure total polyphenol content. HPLC system to analyze photochemical composition. Bioactivity assay: DPPH scavenged and 6% alcohol induced gastric cell damage model is to estimate antioxidant activity. Lipopolysaccharide (LPS) induced nitric oxide (NO), PGE2 production and iNOS, COX-2 expression from RAW264.7 cells.

Results. Among the samples, the Chenpi that was stored for 26 years had better bioactive effect than the others, based on antioxidant activity, the data showed that DPPH(66.88±5.93) and could protection gastric cell from oxidative damage(6% alcohol induced), moreover, about the anti-inflammatory data revealed that inhibition of NO production(IC₅₀=45.13±2.16μg/mL) not only PGE2 production but also iNOS, COX-2 expression could be reduced. According to the bioactivity assay data, we suggested that Chenpi was stored for 26 years might be had more chemical content, indeed, the total polyphenol content(99.39±7.62mg/mL) and had complicated of peak in HPLC fingerprint. Consequently, 26 years of Chenpi showed strong antioxidant and anti-inflammatory effects, therefore, we suggested that Chenpi stored for 26 years was appropriate condition.

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The turnover rates of substance markers from *Paeonia lactiflora* in traditional Chinese medicine decoctions

Li-Yao Tsai^{1,2}, Hsiu-O Ho¹, Ching-Chiung Wang^{1,3,4}

¹*School of Pharmacy, College of Pharmacy, Taipei Medical University, 250 Wu-Xing Street, Taipei City, Taiwan 110, R.O.C.*

²*Division of Research and Analysis, Food and Drug Administration, Ministry of Health and Welfare, 161-2 Kunyang Street, Taipei City, Taiwan 115, R.O.C.*

³*Graduate Institute of Pharmacognosy, Taipei Medical University, 250 Wu-Xing Street, Taipei City, Taiwan 110, R.O.C.*

⁴*Ph.D. Program for the Clinical Drug Discovery from Botanical Herbs, 250 Wu-Xing Street, Taipei City, Taiwan 110, R.O.C.*

Background. Paeoniflorin is the substance marker of *Paeonia lactiflora* Pall. (PL, 白芍), and the specification of the ratio in PL is not less than 1.0% in Taiwan Herbal Pharmacopeia (THP, 臺灣中藥典). In addition, PL also contains rich albiflorin, benzoic acid and gallic acid, etc. However, there is no specification about the ratio of substance markers in concentrated extract products which formulae contain PL.

Objectives. Compute the turnover rate of the major components in three decoctions, Shao Yao Gan Cao Tang (SYGCT, 芍藥甘草湯), Si Wu Tang (SWT, 四物湯) and Si Ni San (SNS, 四逆散), which formulae contain PL. The results would provide a reference for the specification in concentrated extract products.

Methods. Sample preparation: Extracted PL by 50% methanol according to the identification section in THP. Besides, follow the regulation of standard decoction, extracted PL, SYGCT, SWT and SNS by boiling water (TCM-decoction). HPLC-PDA system were used to analysis the major components.

Results. The turnover rates of albiflorin, benzoic acid, gallic acid and paeoniflorin in PL (decoction / 50% methanol) were 90.0%, 242.0%, 168.8% and 84.6%, respectively. And the rates in TCM-decoctions (SYGCT, SWT or SNS decoction / PL decoction) were 86.4-91.7%, 64.0-134.2%, 62.5-89.2% and 87.2-90.7%.

Discussion. Benzoic acid and gallic acid contents of PL in SYGCT and SNS did not significantly change, but significantly decrease in SWT. The phenomenon would probably depend on pH value and associated with *Rehmannia glutinosa* Libosch. (熟地).

Conclusions. The turnover rates of paeoniflorin were more similar in TCM-decoctions than the other major compounds. Therefore, we suggested that paeoniflorin is a suitable substance marker of PL, as the quality marker of medicinal material and concentrated extract products. According turnover rate of paeoniflorin, we suggested 0.6% ($1.0\% \times 87.2\% \times 70\%$), of paeoniflorin in concentrated extract product, such as SYGCT, SWT and SNS is reasonable.

Establishment of the botanical reference materials for traditional Chinese medicine

Kun-Teng Wang^{1,2}, Ming-Chung Lee^{1,2,3}, Wu-Chang Chuang^{1,2,3}

¹*Brion Research Institute of Taiwan, 3F., No.207, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 23143, Taiwan (R.O.C.)*

²*Sun Ten Pharmaceutical Co. Ltd., 3F., No.207, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 23143, Taiwan (R.O.C.)*

³*Herbiotek Co. Ltd., 3F., No.207, Sec. 3, Beixin Rd., Xindian Dist., New Taipei City 23143, Taiwan (R.O.C.)*

Background. Asian main pharmacopeias, Taiwan Herbal Pharmacopeia, Chinese Pharmacopeia, Japanese Pharmacopoeia and Korean Pharmacopoeia, mentioned that traditional Chinese medicine (TCM) pharmaceutical industries must have certified reference materials to act as standards for identification in GMP compliant quality control. However, few commercial reference materials are available and useful at present. It will be a huge and urgent problem for the GMP inspections to these TCM pharmaceutical industries or related researchers.

Objectives. Establishing the worldwide qualified Botanical Reference Materials (BRMs), which are designed as tools to meet the requirements of 100% identity as defined by the GMP, cGMP or PIC/s GMP on TCM pharmaceutical industries.

Methods. Certificate of Analysis (CoA) for BRMs are prepared with specific Lot number, Latin name, Family name, Origin and Plant part information. The regular testing items includes Macroscopic and Microscopic examinations, Loss on drying, Thin layer chromatographic (TLC) identification, and Chemical fingerprinting profile. In TLC identification, a qualitative determination for BRMs, the analytical methodologies derived from various pharmacopoeias are conducted to produce diverse compendial chemical profiles of BRMs. In Chemical fingerprinting profile, a qualitative and quantitative determination for BRMs, multiple analytical techniques such as HPLC/PDA, HPLC/ELSD, HPLC/MS/MS, GC/MS and ICP/MS are appropriately applied to obtain the fingerprint profiles of BRMs, namely *Fingerprint-Verified Botanical Reference Material (f/BRM)*. Moreover, to achieve advanced certification for BRMs, additional Genomic identification is conducted to f/BRM, namely *Geno-Verified Botanical Reference Material (g/BRM)*.

Results. Nowadays, we have archived 30 kinds of authentic BRMs, including 20 kinds of f/BRMs and 10 kinds of g/BRMs. All test results for selected batch of BRMs conform the specifications of various pharmacopoeias or the customization requests.

Discussion. In this study, several analysis equipments are used to analyze or identify the BRMs. This is the first time that the “multiple fingerprints” concept is applied for establishing qualified BRMs.

Conclusions. BRMs can provide users as tools for herbal identity confirmation testing and researches.

P-102 Effects of post-harvest drying method on the biological activity of *Uraria crinite*

Jung Chao¹, Hao-Yuan Cheng², Li-Heng Pao³, Wen-Te Chang⁴, Ming-Kuem Lin⁴,
Wen-Huang Peng^{4*}, Meng-Shiou Lee^{4*}

¹Dept. and Institute of Pharmacology, National Yang-Ming University, Taipei,

Taiwan. ²Dept. of Nursing, Chung Jen College of Nursing, Health Sciences and Management, Chia-Yi, Taiwan. ³School of Pharmacy, National Defense Medical Center, Taipei, Taiwan; Graduate Institute of Health-Industry Technology, Chang Gung University of Science and Technology, Taoyuan, Taiwan; Research Center for Industry of Human Ecology, Chang Gung University of Science and Technology, Taoyuan, Taiwan. ⁴Dept. of Chinese Pharmaceutical Sciences and Chinese Medicine Resources, China Medical University, Taichung, Taiwan. *Author to whom correspondence should be addressed; E-Mail: whpeng@mail.cmu.edu.tw (W.-H.P.); leemengshiou@mail.cmu.edu.tw (M.-S.L.)

Background. Post-harvest processing drying is an important topic for quality control of Chinese Materia Medica (CMM). *Uraria crinita* (UC) is traditionally widely used for digestion regulation and deworming in Taiwan. However little is known about how post-harvest operations affect UC's chemical composition/bioactivity.

Objectives. In our work, UC is used to assess three drying methods (oven-drying/air-drying/sun-drying), as well as oven drying temperature, by exploring the herb's metabolic profile and biological activity profile.

Methods. NMR spectra and multivariate analysis was used to analyze the secondary metabolites of UC extract. Biological activity assays for UC extract includes antioxidant activity, ER-estrogen receptor/luciferase assay and nuclear factor erythroid-2-related factor /luciferase assay.

Results. NMR spectra showed that UC extract contained secondary metabolites (triterpenoids/apigenin/glycosides/ /salicylic acid) and various primary metabolites. Multivariate analysis showed a clear separation of samples into three groups that are consistent with the biological activity assays. UC extracts prepared by oven-drying presented better antioxidant activity, triggering ER-estrogen receptor and NRF-2 signaling pathway.

Discussion. Multivariate analysis showed a clear separation of samples into three groups that are consistent with the biological activity assays. This can ascribed to the presence of higher amounts of secondary metabolites in oven-dried samples.

Conclusions. An appropriate post-harvest drying method is a good approach to increase the bioactivity and quality of UC, both of which are required for Good Agricultural and Collection Practices.

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Background. According to Oriental medical theory, oral decoctions, pills, and powders are primarily used to treat the inner body, whereas acupuncture, moxibustion, and massotherapy are used to treat the outer body. Considering the time needed to ameliorate symptoms, it is preferable to select a treatment method that can ameliorate the chief complaints in the shortest period. Here we verify the point of change in treatment of a patient.

Case Study. The patient was a 52-year-old woman. The history of present illness was as follows: the patient began to experience headache, low-back pain, fatigue, anxiety, and other unidentified complaints from around April 4, which lasted for 2 years. The patient underwent repeated detailed examinations at several medical facilities specializing in modern medicine; however, no abnormalities were detected. The patient was received various treatments; however, there was no change in the chief complaints.

Treatment Methods. The patient visited our clinic in February, 15. The pain score on the visual analog scale (VAS) was 6/7. From these signs, acupuncture was performed in accordance with the wishes of the patient. The mechanism of treatment was to suppress *qi* and supplement the kidney. Headache and low-back pain were ameliorated by this treatment, but the patient continued to complain of fatigue, anxiety, and other unidentified complaints. Although amelioration in *qi* movement was seen after treatment with acupuncture, it was determined that further clearing of heat, moistening of dryness, and supplementing of yin was required; therefore, the patient was persuaded to accept oral treatment with the lycium berry wondrous vision pill (杞菊地黄丸). After 3 days of treatment, fatigue, anxiety, and other unidentified complaints were ameliorated. The VAS score was 1/7.

Discussion. Acupuncture displays instantaneous efficacy in stimulating the movement of *qi* through extracorporeal stimulation, but it has weak internal effects such as in supplementing yin. However, acupuncture therapy was selected for its instantaneous effects, in accordance with the wishes of the patient. Furthermore, we selected pills for treatment with the expectation of sustained effects on the headache and low-back pain and essential effects on fatigue, anxiety, and other unidentified complaints.

Conclusions. From the perspective of improvement of patient quality of life, it is preferable to select treatment of the “tip” as the treatment method which can effectively ameliorate the chief complaints in a short period. However, for long-term treatment, it is better to focus on treating the root cause of the disease to completely cure the disease.

Wan-Chun Cheng¹, Su-Tso Yang^{2,3}

¹Graduate Institute of Chinese Medicine, College of Chinese Medicine, China Medical University, No.91, Hsueh-Shih Road, Taichung, Taiwan.

²Graduate Institute of Chinese Medicine, College of Chinese Medicine, China Medical University, No.91, Hsueh-Shih Road, Taichung, Taiwan.

³Department of Radiology, China Medical University Hospital. Taichung, Taiwan.

Background. The five shu points (五輸穴) Jing-Well (井), Ying-Spring (榮), Shu-Stream (輸), Jing- River (經), and He-Sea (合) have various characteristics according to the properties of the distinctive five phases theory and have been widely utilized in acupuncture treatment. Because the five shu points each have five element character. For example, in Ying Meridians the element character of Jing-Well (井) is wood belong to spring. So use Jing-Well (井) could cure some disease of spring. So it is important that research the five shu points collocates with four seasons.

Objectives. If we choose the five shu points with seasons, could it have more effect? If so, what kinds of effect would increased? In this days, how could we make a big use of the five shu points with seasons? The purpose of this study is to discuss the collocation of five shu points with four seasons.

Methods. 1. Using *Huangdi neijing* 《黃帝內經》 and *Neijing* 《難經》. Analysis 〈診要經終論〉, 〈通評虛實論〉, 〈水熱穴論〉, 〈四時刺逆從論〉, 〈本輸〉, 〈終始〉, 〈四時氣〉, 〈寒熱病〉, 〈順氣一日分為四時〉 and 〈七十四難〉. 2. Using bibliography: 《太素》仁和寺本, 丹波元簡 《素問識》, 《素問》全元起輯復本.

Results. From *Huangdi neijing* 《黃帝內經》 and *Neijing* 《難經》, there are some texts related to the acupuncture treatment in four seasons. But the methods about the collocation of five shu points with four seasons are different.

Discussion. To understand more clearly than before, we must choose good edition to do research. Review of research, in Ming dynasty, the doctor 馬蒔 thinks the meaning in *shuirexuelun* 〈水熱穴論〉, *benshi* 〈本輸〉 are the same. But *sishiciniconglun* 〈四時刺逆從論〉 is totally different. In Japan, doctor 丹波元簡 suspects that the acupuncture rules with four seasons in *shuirexuelun* 〈水熱穴論〉 is as clearly as possible, but it also different with other texts. Maybe this part is belongs to other texts. In *shuirexuelun* 〈水熱穴論〉, *benshi* 〈本輸〉 and *shunqiyiri-fenweisishii* 〈順氣一日分為四時〉, texts indicate that in autumn we should puncture He-Sea (合). Compared to *Neijing* 《難經》, it is said we have to puncture He-Sea (合) in the winter time. The proper choice in clinical diagnosis and therapy seems debatable. **Conclusions.** Using the five shu points with seasons could make more effect. We could follow “春取絡 脈分肉”, “夏取盛經分腠”, “秋取經俞”, “冬取井榮”. In autumn, use Shu-Stream (輸) to “瀉陰邪”, He-Sea (合) to “虛陽邪. In winter, use Jing-Well (井) to “下陰逆”, Ying-Spring (榮) to “實陽氣”. We use puncture five Shu points not only treatment based on categorical identification but also follow season changed.

P-105 Effect of JianJing(GB21) cupping therapy on flow acceleration of middle cerebral artery: Case report

Hobin Moon¹, Sookyung Kim²

¹Bichedam Clinic of Korean Medicine, Seoul, Republic of Korea

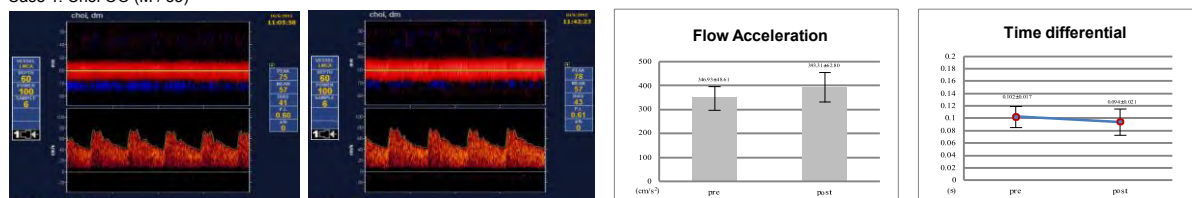
²Yewon Clinic of Korean Medicine, Seoul, Republic of Korea

Objectives & Methods.

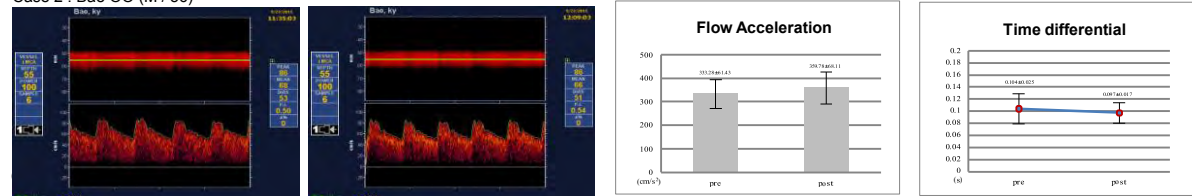
This study was performed to evaluate the effect of GB21 cupping therapy on Flow Acceleration(FA) of Middle Cerebral Artery(MCA). FA was measured from Transcranial Doppler sonography(TCD) waveforms before and after GB21 cupping therapy in 3 patients, and calculated by the formula : FA = Peak systolic velocity(PSV) – End diastolic velocity(EDV) / Time differential(TD).

Results.

Case 1. Choi OO (M / 55)



Case 2 . Bae OO (M / 56)



Case 3 . Kim OO (F / 55)

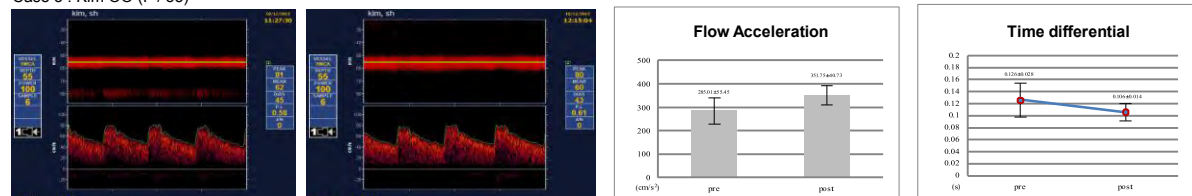


Table 1. Comparison of values among pre & post GB21 cupping therapy

	FA(pre)	FA(post)	TD(pre)	TD(post)	PSV-EDV (pre)	PSV-EDV(post)
Case 1	346.93 ± 48.61	393.31 ± 62.80	0.102 ± 0.017	0.094 ± 0.021	34.72 ± 1.67	35.89 ± 1.76
Case 2	333.28 ± 61.43	359.78 ± 68.11	0.104 ± 0.025	0.097 ± 0.017	33.37 ± 1.03	33.94 ± 2.44
Case 3	285.01 ± 55.45	351.75 ± 40.73	0.126 ± 0.028	0.106 ± 0.014	34.58 ± 1.83	36.74 ± 3.27

Values are Mean ± SD.

Conclusions. FlowAcceleration (FA)of MCA increased after GB21 cuppingtherapy. Timedifferential (TD) decreased after GB21 cupping therapy, whereas PSV-EDV did not change significantly. The results suggest that GB21cupping therapy increased FA of MCA, andthechangeofFAwasassociatedwith decrease of Time differential (TD).

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Adverse event reports in Ehime prefectural central hospital east Asian traditional medicine acupuncture and moxibustion care unit

Okawa Y^{1,3}, Tsujioka Y¹, Yamami T^{1,3}, Shimizu G¹, Kakuto H¹, Yamashita H³, Yamaoka D^{1,2}

¹*Department of East Asian Traditional Medicine, Ehime Prefectural Central Hospital, 83 Kasugamachi, Matsuyama City, Ehime, 790-0024, Japan*

²*Department of Internal Medicine, Ehime Prefectural Niihama Hospital, 3-1-1 Hongo, Niihama City, Ehime, 792-0042, Japan*

³*Morinomiya University of Medical Sciences Acupuncture Information Center, 1-26-16 Nanko-Kita, Suminoe-Ku, Osaka City, Osaka, 559-8611, Japan*

Background. We perform bloodletting therapy (BLT, 刺絡療法) for most of patients who visit our institution. Although BLT is empirically believed to be effective and safe, the evidence demonstrated so far is poor.

Objectives. To investigate the safety of acupuncture and moxibustion treatment including BLT.

Methods. Retrospective survey of medical records of outpatients who visited our institution between Jan 1, 2014 and Aug 1, 2015. We extracted descriptions on adverse event (AE) from those records. We defined AE as “Unfavorable medical event that occurred during or after treatment, with or without causality”.

Results. We investigated the medical records of 101 outpatients, of which 92 patients (91%) had received BLT at least once as well as acupuncture and moxibustion. Out of the 2,181 treatment sessions in total (23.7±8.8 treatments per patient (mean ± SD)), 27 AEs in 16 patients were identified. Accordingly the incidence of some sort of AE was 1.24% per session, and 17.4% per patient. All of the AE were classified as “minor”, and severe AEs were not identified in the present survey.

Discussion. Based on the results above, BLT seems to be relatively safe. However, this speculation is limited because of (1) small number of samples investigates, (2) retrospective survey including reporting, recall and cognitive bias, and (3) no records on patients who dropped out possibly due to a severe AE (selection bias). We are planning to conduct a prospective survey with larger number of patients in order to reach a firmer conclusion on the safety of BLT.

Conclusions. Based on our tentative retrospective survey on medical records, BLT seems to be relatively safe. In the future, a better-designed prospective survey should be conducted to confirm the safety of BLT.

Risk associated with bee venom therapy: A systematic review and meta-analysis

Jeong Hwan Park¹, Bo Kyung Yim², Jun-Hwan Lee¹, Sanghun Lee¹, Tae-Hun Kim³

¹*Korea Institute of Oriental Medicine, Daejeon, South Korea*

²*Korea Health Industry Development Institute, Cheongju, South Korea*

³*Kyung Hee University, Seoul, South Korea*

Background The safety of bee venom as a therapeutic compound has been extensively studied, resulting in the identification of potential adverse events, which range from trivial skin reactions that usually resolve over several days to life-threatening severe immunological responses such as anaphylaxis.

Objectives. In this systematic review, we provide a summary of the types and prevalence of adverse events associated with bee venom therapy.

Methods. We searched the literature using 12 databases from their inception to June 2014, without language restrictions. We included all types of clinical studies in which bee venom was used as a key intervention and adverse events that may have been causally related to bee venom therapy were reported.

Results. A total of 145 studies, including 20 randomized controlled trials, 79 audits and cohort studies, 33 single-case studies, and 13 case series, were evaluated in this review. The median frequency of patients who experienced adverse events related to venom immunotherapy was 28.87% (interquartile range, 14.57–39.74) in the audit studies. Compared with normal saline injection, bee venom acupuncture showed a 261% increased relative risk for the occurrence of adverse events (relative risk, 3.61; 95% confidence interval, 2.10 to 6.20) in the randomized controlled trials, which might be overestimated or underestimated owing to the poor reporting quality of the included studies.

Discussion. While it is evident that BVA clearly increases the risk of AEs in comparison with normal saline, our review revealed that BSA and BVA are often implemented without a skin test, and also showed that patients have experienced SAEs that can be fatal after receiving BSA from unqualified personnel. Therefore, in order to enhance the safety of BVT, a skin test should be conducted before BVT is administered, and the venom should be administered only by qualified individuals. Based on the results of this review, several suggestions can be made to support effective clinical practice and future clinical trials with BVT. In order to support responsible use of BVT, educational materials on the safety and efficacy of BVT should be made available for patients.

Conclusions. Adverse events related to bee venom therapy are frequent; therefore, practitioners of bee venom therapy should be cautious when applying it in daily clinical practice, and the practitioner's education and qualifications regarding the use of bee venom therapy should be ensured.

Influences of stimulation with moxibustion on gastric motility and heart rate variability

Junji Miyazaki^{1,2}, Maiko Shirai², Hiroshi Kuge^{2,3}, Hidetoshi Mori³

¹*Department of Acupuncture, Faculty of Health Care Sciences, Takarazuka University of Medical and Health Care, Takarazuka, Japan*

²*Department of Anesthesiology, Osaka Medical College Hospital, Osaka, Japan*

³*Department of Health, Faculty of Health Science, Tsukuba University of Technology, Tsukuba, Japan*

Objectives. This study examined the influences of stimulation with moxibustion on gastric motility and heart rate variability in different regions.

Methods. Conforming to the Declaration of Helsinki, explanations of the study were provided to potential subjects, and 22 healthy adults (10 males and 12 females) who consented were studied. The participants were randomized into 3 groups: A (8): no stimulation; B (7): applying stimulation with moxibustion in the abdominal region (at point Zhongwan: CV12); and C (7): applying stimulation with moxibustion in the lower-limb region (at point Zusanli: ST36). Stimulation was applied once using the cylindrical moxibustion, with a 30-minute rest period in a supine position before and after it, to record electrogastrograms (EGG) and heart rate variability (HRV). Recorded EGG and HRV were analyzed using the Fast Fourier Transform method for frequency analysis. Furthermore, to examine time-dependent changes, statistical analysis was performed using a mixed model and Fisher's (LSD) multiple comparison method. Time-dependent changes among the groups were examined by analyzing reciprocal actions. A significant difference was set at 5% of the risk rate.

Results. In group-B, EGG values decreased 18 ± 2.1 minutes after stimulation (post 5; $p=0.048$). In contrast, in group-C, the values increased 18 ± 2.1 (post 5; $p=0.01$), 22 ± 2.1 (6; $p=0.023$), and 24 ± 2.1 (7; $p=0.01$) minutes after stimulation. Time-dependent changes among the 3 groups indicated reciprocation ($p=0.002$). The heart rate increased in group-A 27.5 ± 2.5 minutes after stimulation (post 6; $p=0.029$), but decreased in group-C 7.5 ± 2.5 (post 2; $p=0.033$), 12.5 ± 2.5 (3; $p=0.013$), and 17.5 ± 2.5 (4; $p=0.015$) minutes after it. Time-dependent changes among the 3 groups did not indicate reciprocation.

Discussion. The influence of stimulation with moxibustion on gastric motility varied depending on the region, suggesting the necessity of applying stimulation with moxibustion in consideration of symptoms and meals.

Conclusions. The influence of stimulation with moxibustion on gastric motility may vary depending on the region.

Laser acupuncture in simple obesity therapy: Preliminary results of a trial on an alternative treatment for reducing weight

Chen-Cheng Yang^{1,2,3}, Hung-Yi Chuang^{3,4}, Cheng-Che Lin⁵, Sharon Kam⁶

1. Health Management Center, Kaohsiung Municipal Ta-Tung Hospital, Kaohsiung, Taiwan

2. Health Management Center, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan

3. Department of Occupational and Environmental Medicine, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan

4. Department of Public Health, Kaohsiung Medical University, Kaohsiung, Taiwan

5. Department of Chinese Medicine, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan

6. Department of Biology, Stanford University, USA

Background. As the prevalence of obesity increases worldwide, new treatments are being sought for weight reduction. Previous studies have indicated that acupuncture is effective in treating obesity and we seek to determine if laser acupuncture, a form of acupuncture that has recently been gaining popularity, can significantly diminish the adverse effects of obesity.

Objectives. The aim is to determine whether laser acupuncture is an effective treatment for simple obesity in participants in Taiwan following a non-restrictive diet protocol.

Methods. The study was conducted in Kaohsiung Medical University Hospital (KMUH) between May 2013 and present. Subjects inclusion criteria were: (1) above 20 years of age, (2) BMI >25kg/m², or waist circumference over 80cm for females/ 90cm for males. Participants with dermatitis, pregnant, using pacemaker, epilepsy history, immunocompromised status, taking other medicines and having other treatments for weight loss, eating disorders or other psychiatric conditions were excluded. Study design was a double-blind crossover trial. The study format consisted of each participant undergoing two 12-week sessions of acupuncture with a 2-week break in between. The participants received laser acupuncture during one of the 12-week sessions and received sham acupuncture in the other 12-week period. Both the participant and technician were blind to true and sham laser acupuncture during the first or second period, resulting in a double-blind crossover study protocol.

Results. This randomized crossover study is still ongoing and aims to conclude with a sample size of 200 participants. In this report, we present preliminary results with datasets from the first 60 participants, with 30 receiving the control treatment and 30 receiving laser acupuncture. The data presented consists only of the first treatment session and does not include the crossover portion of the trial. Participants were randomly split into two groups, and no significant difference in baseline characteristics was found between the sham (SA) and laser acupuncture (LA) groups. We obtained a statistically significant drop in body weight ($p=0.046$) and waist circumference ($p=0.003$) during the first 12 weeks of LA treatment. No significant decrease in these two parameters was found in the placebo group. However, a significant reduction in body fat was found in the SA group was found ($p=0.036$) with no change in the LA group.

Conclusions. Laser acupuncture is a promising new form of acupuncture recognized for being painless and less prone to infection of the treatment area. However, debate exists over its effectiveness as the low-level energy can be scattered while penetrating skin. The preliminary results of our randomized clinical trial show statistically significant reductions in body weight and waist circumference after 12 weeks of laser acupuncture treatment.

Acupuncture and leeches is the complex treatment of a facial nerve's neuropathy.

Yury Ponomarev¹, Natalia Ponomareva², Aleksandr Boharnikov³, Anton Ponomarev¹, Pavel Ponomarev¹

¹*Clinic of oriental medicine, 113, Svetlanskaya str. Vladivostok, Russia*

²*Sanatorium "Okean", 15a Uborevicha str. Vladivostok, Russia*

³*Pacific State Medical University, 2, Ostriakova Avenue Vladivostok, Russia*

Background. A neuropathy of a facial nerve (paralysis Bella) is very frequent disease of maxillofacial area, which is characterized by paralysis, or paresis of mimic muscles on the struck half of the face, asymmetry of the person and the long recovery period. The complete recovery of functions of mimic muscles when we use medicinal methods of treatment comes in 40-60% of cases. At part of patients (15 - 32,5%) can develop complication— a contracture of mimic muscles or recurrence of an illness.

Purpose. To develop a technique of complex treatment by methods of traditional medicine, for acceleration of functions restoration of mimic muscles and not to allow development of a contracture.

Methods. For treatment of a facial nerve's neuropathy, we used the combination method of acupuncture and leeches. We started using these methods in the first 2-3 days after emergence of the disease's symptoms. In the period of paralysis for acupuncture points were used of a locus of the paralyzed part by an exciting method and on the opposite side and the remote points by a brake method. For leeches points we used the field of a mastoid shoot of a temporal bone on the struck part. At emergence of movements of mimic muscles, the technique of impact on points changed with exciting on the braking. In general, 2-3 courses of procedures were conducted till 10-15.

Results. 62 patients were treated with the age from 26 till 68 years, men were 24, women 38. As a result of treatment efficiency made 82%. After one course of treatment 33 patients had a complete recovery of movements of mimic muscles, a field second courses restoration was at 18. At 11 patients was conducted third course combined course after which the expected result followed.

Discussion. At a facial nerve's neuropathy application of leeches promotes fast removal of the inflammation and elimination of hypostasis of a facial nerve in the bone channel of a temporal bone, and acupuncture promotes fast restoration of conductivity of a nervous impulse on nervous trunks. At a combination of these methods the expressed medical effect was observed.

Conclusions. The combined application of leeches and acupuncture considerably increases efficiency of the treatment of a facial nerve's neuropathy and interferes with development of complications.

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Moxibustion improved knee pain of cancer-bearing woman by stimulating TRP (Transient Receptor Potential) channels: a case report

Yukari Nose¹, Mitsuyuki Takamura², Mizuki Hashimoto¹, Yusuke Mukai¹, Satoshi Suzuki^{1,3}, Kaitou Mizuno³, Ko Nishimura³, Kazuro Sasaki³, Ayumu Yokochi⁴, Kazuo Maruyama⁴

¹*Mie University Hospital department of Integrated medicine/Acupuncture and Moxibustion, Edobashi 2-174, Tsu-city, Japan*

²*Mie University Hospital Kampo medicine outpatient department, Edobashi 2-174, Tsu-city, Japan*

³*Suzuka University of medical science, faculty of Health science, department of Acupuncture and Moxibustion, Suzuka-city, Japan*

⁴*Department of Anesthesiology and Critical Care Medicine, Mie University School of Medicine, Edobashi 2-174 Tsu-city, Japan*

Background. The differences of ways of facilitating pain relieving mechanism between acupuncture and moxibustion are not evidently clear by now. On the other hand, each TRP (transient receptor potential) channels have own activating temperature, moxibustion heat might stimulate TRPV1 (vanilloid1). We experienced a case suggesting that theory.

Report. 50y.o. woman who suffering from pancreas cancer had been complaining of right knee pain during chemo-radiation therapy. But X-ray investigation and clinical examination of the lesion revealed no abnormal findings. She felt coldness in foot, needed socks anytime. She also had a sleeping problem. Right knee lesion had no signs of swelling or heat. To facilitate the flow of blood and relief the pain, we treated her 3times per week. We chose acupoints as follows: ST10(Xuehai), ST34(Liangqiu), ST35(Dubi), SP6(Sanyinjiao), ST36(Zusanli), Ex-Le4(Neixiyan), Ex-Le10(Bafeng). Complaints of sleepless and coldness improved soon but knee pain remained even at 3rd visit. However, knee pain apparently improved after altering acupuncture into moxibustion on several acupoints same as above.

Discussion. It is considered that acupuncture and moxibustion facilitate descending pain inhibitory system involving A δ /C fibers via stimulating nociceptors. They also relieve pain by increasing regional blood flows via activating axon reflex. A δ fibers transfer sharp pains; C fibers have mechanical and chemical receptors besides polymodal receptors on free nerve endings. Ones of these channels are thought to be TRP (transient receptor potential) channels family. Each channel have own activating temperature, moxibustion heat is thought to stimulate TRPV1. Accordingly, we assume that moxibustion was dominantly effective via TRPV1 mechanism in this case.

Conclusions. We experienced a case suggesting that moxibustion stimulates pain relieving mechanism via TRPV1.

P-112 Efficacy of Placenta therapy on different types of diseases - Acupuncture point injection-

Mahiko Nagase¹, Yasuhito Todokoro¹, Hua Sheng Kou¹, Isamu Tengan²,
Yasushi Hara³, Kazuo Uebaba⁴

¹*Kichijyoji Traditional Chinese Medicine Clinic, 1-13-6-5F Kichijyoji Honcho,
Musashino-City, Tokyo Japan*

²*Tougou Medical Center Clinic Ginowan, 7-7-22 Oyama, Ginowan, Okinawa
Japan*

³*Hara Clinic, 1165-1 Yuge, Tagawa-City, Fukuoka Japan*

⁴*Faculty of Health Care, Teikyo Heisei University, 2-51-4 Higashi-ikebukuro,
Toshima-ku, Tokyo Japan*

Background. Placenta therapy is defined as therapy using placenta. Two types of injections containing extract of human placenta, "Melsmon" and "Laennec", were developed in Japan.

The potential of human placenta extract injections is presented with a discussion of their mechanism of action and effective cases in which acupuncture point injection was used are also presented.

Report. Case 1: A 54-year-old woman with a 25-year history of migraine treated with all kinds of analgesic but ineffective presented with severe headache and persistent nausea. Case 2: A 71-year-old woman with a 1.5-year history of PHN (Post Herpetic Neuralgia) treated with all kinds of analgesic but ineffective presented with severe chest and upper back neuralgia.

Methods. Human placenta extract was injected into acupuncture points once or twice a week in both cases. Acupuncture points BL10 (天柱), BL17 (膈俞), BL18 (肝俞), GB21 (肩井) and SI14 (肩外俞) were selected in case 1 and SI10 (臑腧), SI12 (秉風), ST15 (屋翳) and some trigger points (阿是穴) were selected in case 2 for the application of the placenta extract.

Results. In both cases pain had almost relieved. Case 1: Headache free for more than 3 months at 1.5 years after the first treatment. Case 2: VSA has improved from 10/10 to 3/10 3 months after the first treatment.

Discussion. Human placenta extract is known to mediate immunotropic, antioxidative and anti-inflammatory responses. Combined treatment with human placenta extract and acupuncture point injection may evoke synergistic effects.

Conclusions. Acupuncture point injection therapy of human placenta extract has a possibility to improve different types of diseases.

References.

Yeom, M. J., H. C. Lee, et al. "Therapeutic effects of Hominis placenta injection into an acupuncture point on the inflammatory responses in subchondral bone region of adjuvant-induced polyarthritic rat." *Biol Pharm Bull* 2003 26(10): 1472-1477.

P-113

Acupuncture point injection; a new method for improving complex regional pain syndrome

Tae Hwan Cho¹, Kyeong Mee Park²

¹*Cho Orthopaedic Clinic, Seoul, South Korea*

²*Inno Oriental Clinic, Daejeon, South Korea*

Background. Complex regional pain syndrome (CRPS) is a painful condition developed after a traumatic injury of extremities. Earlier trials demonstrated that long-term acupuncture treatment merely reduced pains but not other inflammatory parameters of CRPS including swelling, mobility, temperature and redness. In order to improve various inflammatory symptoms, we attempted acupuncture point injection with placental extract to a CRPS patient.

Report. The case of a female patient who developed CRPS in the left upper limb after a traumatic injury on the distal part of the left forearm is reported. The pain was immediate and resistant to both oral analgesics and continued transcutaneous electrical nerve stimulation. Five months after the injury, the patient presented to our clinic with severe pain, swelling, redness, cold sensation of the left hand and even loss of function from the left hand up to the left shoulder. Acupuncture points LI5, LU2, SI10, HT1, GB21 and SI11, localized on the joints or the muscles responsible for movement of the left upper limb, were selected for application of placental extract. With the repeated treatment, the pain, the skin color change and the cold sensation in the hand and the lower forearm have disappeared. In addition, the swelling of the wrist joint and the metacarpophalangeal joint of the index finger was lost. Movement of the left wrist joint and the left shoulder joint was gradually increased and finally normalized as placental extract was continuously injected into the acupuncture points.

Discussion. Injection of placental extract into acupuncture points LI5, LU2 and SI10 which were localized on radioscaphoid joint, anterior and posterior scapulohumeral joint respectively, seems to relieve pain and normalize mobility by stabilizing joint dysfunction. Moreover, injection of placental extract into acupuncture points HT1, GB21 and SI11 which were coincident with trigger points of subscapularis, upper trapezius and infraspinatus seems to decrease overall sensitivity in patients thus to result in pain relief and normal motor recovery by restoring muscular imbalance.

Conclusions. We conclude that a long-term injection of placental extract into acupuncture points LI5, LU2, SI10, HT1, GB21 and SI11 relive pain, eliminates swelling, and recover mobility in the affected upper limb in a CRPS patient. These results imply that the medicinal effects of placental extract and acupuncture synergistically act to improve CRPS.

P-114**Acupuncture improves the QOL of patients with cancer under palliative care**

Ai Kouchi, Satoru Yamaguchi, Tomokazu Kikuchi, Hideyuki Isobe

Department of Oriental and Integrative Medicine, Saitama Medical University

Background. Lately, there have been many reports in the palliative care field on self-entry- style QOL evaluation by patients with cancer. However, because few terminally ill patients can tolerate long time answering a questionnaire, a minimum number of questions plus physical and mental evaluation must be used.

Objectives. To assess measurable complaints and QOL using a questionnaire with less questions than SF-8 (acute version), and to determine the role of acupuncture in patients with cancer under palliative care using the Japanese version of EuroQOL (EQ-5D).

Method. Study design: A prospective, open-label, anteroposterior comparison. Setting: Three hospitals of two universities and one general hospital. The inclusion criteria were side effects and complications of cancer therapy, age < 80 years and > 20 years, ability to communicate, and signed informed consent. Patients who did not provide their informed consent were excluded from the study. The acupuncture is given 1~2 convolution to the overall status of the patients individual in a week. VAS, SF -8 and EQ-5D were used to evaluate complaints and health condition before acupuncture and two weeks later, and the effect of acupuncture was examined.

Results. There were 15 (7 men, 8 women) patients with terminal cancer [average age 64.8 ± 7.6 y.o. (mean ±S.D.)]. [1] Colorectal cancer, five lung cancer was most common followed by there was the underlying disease in order of two pancreas cancer. There were 27 complaints candidates for acupuncture treatment, including four cases of nausea as side effect of chemotherapy, ??? cases of abdominal distension, two of neck shoulder discomfort with constipation, three of lumbago, and ??? cases of ascitis; in total there were 12 evaluable patients. [2] The VAS of complaints decreased after two weeks of acupuncture therapy ($p < 0.05$). [3] There were no significant changes in PCS after acupuncture as evaluated using SF-8, but MCS increased after acupuncture ($p < 0.05$). As for the effect level of 4.EQ-5D, 0.267 → 0.218 and health condition VAS40.3 → 40.1 was maintained by continuing acupuncture.

Discussion. Because cancer patients requiring palliative care have a very poor overall status, it is assumed that it is difficult to evaluate their QOL. In these terminally ill cancer patients, it was easier to evaluate the effects of continued acupuncture for a great variety of complaints on their QOL using EQ-5D than using SF-8; the results showed that there was a reduction of complaints and maintenance or partial improvement of their QOL. We think QOL evaluation to be highly useful as an index of the efficacy of acupuncture in cancer patients.

Conclusions. Because acupuncture for patients with cancer contributes to an improvement of the patient status and QOL, we think that its role in palliative care is enormous.

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Quality of randomized control trials on acupuncture conducted in Japan

- Evaluation using Cochrane risk of bias tool -

Shoko Masuyama¹, Hitoshi Yamashita^{1,2},

¹ *Morinomiya University of Medical Sciences, 1-26-16 Nanko-Kita, Suminoe-Ku, Osaka, Japan*

² *Morinomiya University of Medical Sciences Acupuncture Information Center, 1-26-16 Nanko-Kita, Suminoe-Ku, Osaka, Japan*

Background. Although Jadad score has been used to evaluate the quality of randomized control trials (RCT) on acupuncture conducted in Japan, this score is not sufficient to review risks of bias in RCTs. Today risk of bias (RoB) tool in Cochrane Systematic Reviews is believed to be more appropriate.

Objectives. To assess risks of bias in RCTs on acupuncture conducted in Japan.

Methods. We performed a literature search by using “Ichushi (Japana Centra Revuo Medicina) Web”, PubMed, review paper by Tsukayama et al (Clin Acupunct Orient Med 2002;3:105-113), database by Tsutani et al (JRC-RCT), and our own files. Only RCTs which assessed clinical effect of acupuncture for patients in Japan were included. RCTs published only in abstract were excluded. We used Cochrane RoB tool to evaluate these RCTs.

Results. As of December 2014, we located 145 trials including conference abstracts. Of these, 86 trials were published as full paper. Our judgements with RoB tool were as follows:

1. [Sequence generation] low risk of bias 64%, unclear 31%, high risk of bias 5%.
2. [Allocation concealment] low risk of bias 16%, unclear 78%, high risk of bias 6%.
3. [Blinding of patients] low risk of bias 47%, unclear 1%, high risk of bias 52%.
4. [Blinding of physicians] low risk of bias 2%, unclear 1%, high risk of bias 97%.
5. [Blinding of assessors] low risk of bias 30%, unclear 67%, high risk of bias 2%.
6. [Incomplete outcome data] low risk of bias 21%, unclear 51%, high risk of bias 28%.
7. [Selective outcome reporting] low risk of bias 2%, unclear 1%, high risk of bias 97%.
8. [Other potential threats to Validity] low risk of bias 20%, unclear 58%, high risk of bias 22%.

Discussion. There are many papers which do not explain specific method of randomization and allocation concealment. Domains of “incomplete outcome data” and “selective outcome reporting” were poorly evaluated perhaps because clinical trial registration and ITT analysis had not been pervading in Japanese acupuncture researchers until recently.

Conclusions. The quality of RCTs on acupuncture conducted in Japan need to be improved in terms of risks of bias. The relevant clinical researcher's awareness and recognition of Cochrane RoB tool will lead to achievement of this improvement.

(COI statement: The authors have no financial conflict of interest.)

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Three cases of cutaneous warts treated with moxibustion

Youngee Yun¹, Sangho Shin², Kyu seok Kim¹, Seong-Gyu Ko³, Inhwa Choi¹

¹*Department of Dermatology of Korean Medicine, College of Korean Medicine, Kyung Hee University, Seoul, Korea*

²*Amar Clinic of Korean Medicine, Pusan, Korea*

³*Department of Prevention Medicine, College of Korean Medicine, Kyung Hee University, Seoul,*

Background. Moxibustion is a procedure that uses the heat generated by the burning of herbal preparations to stimulate specific points for treating disease. It uses heat stimulation at various temperature levels, ranging from mild skin warming to tissue damage from burning. Studies have shown that possible mechanisms of moxibustion are related to the thermal effect.

Objectives. Using moxibustion in the treatment of dermatological conditions such as cutaneous warts has not been reported until now. We report three cases of cutaneous warts successfully resolved after direct moxibustion treatment.

Methods. Patients received direct moxibustion using moxa cones made of *Artemisia argyi*. Moxa cones were placed directly on all of the warts, and the top of the moxa cone was ignited. When 80% of moxa cone had burned and the patient felt the burning, the moxa cone was removed and another cone was placed and ignited. We repeated this sequence 10 times on all of the lesions within a single session, until warts had shrunk or disappeared. With each session, wart lesions were softened, partially eliminated, or reduced. After warts were completely eliminated, patients received direct moxibustion 5 times within each session, each involving the burning of approximately 60% of a moxa cone or burning the moxa until the patient felt heat sensitization but no pain.

Results. As part of this approach, 3 patients underwent 5 to 19 moxibustion procedures during and after wart removal. After warts were completely eliminated, moxa burning was performed on each patient until approximately 60% of a cone was burned or the patient felt heat sensitization but no pain.

Discussion. A possible mechanism is that direct moxibustion likely induces tissue damage from burning and, a wound healing effect at a different temperature level. In direct moxibustion, a cone-shaped herbal preparation is attached on the skin surface and supplies heat directly. In these three cases, we changed moxa cones when 80% of a moxa cone had burned, and the patient felt the burning before the warts were eliminated. After warts were completely eliminated, skin seemed to get burned. We tried to let the patients feel warm or heat sensation only during the procedure. Local thermotherapy at approximately 38°C has been reported to have a positive effect on wound healing because it can increase extensibility of collagen tissues and vasodilate and increase blood flow.

Conclusions. Based on our clinical experience and previous studies on effects of different temperatures of moxibustion, temperature level of moxibustion might be an important clinical consideration in the treatment of cutaneous warts without side effects such as burning or scars.

P-117 The relaxing effect of lower leg acupuncture stimulation on university students who live a sedentary lifestyle, from the perspectives of physical movement and autonomic nerve activity - Considerations based on a randomized controlled trial-

Hiroie Motoyama¹, Yoshito Mukaino MD PhD² Hirohisa Isogai³

¹*Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology, 2-4 Hibikino, Wakamatsu-ku, Kitakyushu 808-0196, Japan* ²*Faculty of Sports, and Health Science, Fukuoka University, 8-19-1 Nanakuma, Jonan-ku, 814-0180, Fukuoka, Japan*

³*Faculty of Computer Science and Systems Engineering, Department of Human Sciences, 2-4 Hibikino, Wakamatsu-ku, Kitakyushu 808-0196, Japan*

Background. University students living in a sedentary lifestyle have often musculoskeletal symptoms and a feeling of fatigue by due to engage in unfavorable postures for long-term of use in class. This could cause other symptoms such as long-term sick absence. These symptoms occur due to the involvement of autonomic nerve system. We have often observed that acupuncture stimulation to the lower limbs brings about improved movement in the cervical and is often simultaneously relieved autonomic nerve symptoms.

Objectives. The authors focused on the impact of acupuncture stimulation to the lower legs on the movement of the cervical and autonomic nerve activity.

Methods. A group of 28 students (Male n=13/Female n=15) in whom abnormalities were noted in Straight Leg Raising Test (SLR) and cervical movement (cervical anteflexion, retroflexion, left-right rotation, left-right lateroflexion) as a result of diagnostic therapy, taking physical symptoms related to movement as its index, were randomly divided into an Acupuncture Treatment Group (n=14) and a Control Group (n=14). The Acupuncture Treatment Group was punctured with press needles (a diameter of 0.2mm and length of 0.6mm SEIRIN PYONEX) at acupoints KI9, BL58, KI6 and BL62 on both sides. In addition to evaluating movement within the SLR and cervical, a GMS-manufactured wireless body sensor was used to analyze heart rate variability.

Results. SLR movement improved in the Acupuncture Treatment Group, while at the same time, cervical movement also improved. A significant reduction was noted in the LF/HF ratio (indicator of sympathetic activity), along with a significant increase in HF (indicator of parasympathetic activity). At the same time, there were no changes in the Control Group.

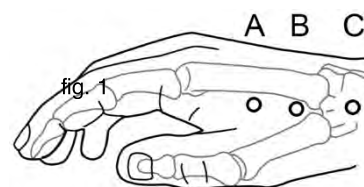
Conclusions. Acupuncture therapy to the lower limbs can improve abnormalities in SLR and cervical movement, in addition to having a relaxing effect, which controlling the sympathetic activity and accelerating the parasympathetic activity.

Yiu-Ming Wong¹

¹Health Science Unit (PEC)

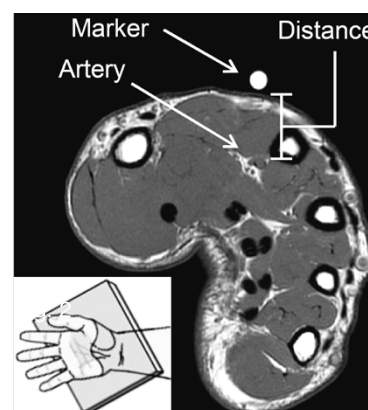
Hong Kong Physically Handicapped & Able Bodied Association, Hong Kong

Background. The Hegu (LI4) point, located on the lateral side of the hand, is one of the most commonly used acupuncture points. However, the placement of Hegu is different in textbooks used for teaching acupuncture. For example in fig. 1, three Hegu placements are labeled as A (WHO standardized), B (Traditional) and C (Sawada-style 沢田流).



Objectives. The radial artery and its branches are located underneath the Hegu points; in other words, needling of the Hegu point could potentially injure the artery. The present study investigated the optimal needling depth for different Hegu points using Magnetic Resonance Imaging (MRI).

Methods. Fifteen normal-weight healthy male adults had the Hegu points of their dominant hand outlined using MRI markers (fig. 2). While the subjects were lying supine and their forearms were neutrally positioned, the hands were MRI-scanned so the radial artery under the Hegu points could be visually distinguished. The transverse MRI images were analyzed for the distance between the Hegu points and the radial artery corresponding to the depth of needle insertion that may reach the radial artery during actual acupuncture (fig. 2).



Results. The distance between different Hegu points and the radial artery are:

A (WHO standardized): 1.63 ± 0.13 cm (mean $\pm$ SD); range from 1.46 to 1.87 cm.

B (Traditional): 1.51 ± 0.12 cm (mean $\pm$ SD); range from 1.35 to 1.73 cm.

C (Sawada-style): 0.61 ± 0.11 cm (mean $\pm$ SD); range from 0.43 to 0.87 cm.

Statistically, one-way ANOVA shows that only the C values is significantly different from that of the A and B ($p < 0.01$).

Discussion. While the locations of the radial artery have a certain anatomic variability among individuals, this study provides a clinical reference of optimal Hegu needling depth for male adults. These findings may not be generalized to females, pediatric and geriatric groups directly.

Conclusions. The needle insertion < 0.4 cm for Sawada-style Hegu, < 1.3 cm for traditional Hegu and < 1.4 cm for WHO standardized Hegu may be the most appropriate for normal-weight male adults.

A survey of adverse events by acupuncture using accident Information databank

Hisashi Shinbara¹, Keiko Yukawa², Toshihiro Togo³, Kiichiro Tsutani³

¹*Meiji University of Integrative Medicine, Nantan, Japan*

²*National Institute of Public Health, Wako, Japan*

³*Tokyo Ariake University of Medical and Health Sciences, Tokyo, Japan*

Background. Few studies have been conducted on how safety information of integrative medical treatments, particularly information on harm to health (adverse events) is managed in Japan.

Objective. We surveyed web-based adverse event databases run by public bodies and examined usefulness and other related issues concerning acupuncture (Acp) and moxibustion (Mox) treatments.

Methods. We searched the adverse event databases using Google with keywords including “医療事故” (medical accident), “有害事象” (adverse event), “副作用” (side effects), “事故” (accident) and “データベース” (database) on 31 Dec. 2014. We then studied the databases to find out whether or not they contained any information about adverse events concerning Acp and Mox.

Results. There were a total of seven web-based adverse event databases run by public bodies. Four of them contained adverse event information relating to Acp and Mox: the National Consumer Affairs Center of Japan database (609 hits), the Accident Information Databank (281 hits), the Consumer Product Safety Field - Accident Information Database (1 hit), and the Medical Accident and Incident Report database (1 hit). In the Accident Information Databank between 2009 and 2013, the numbers of cases by injury or illness relevant to Acp and Mox were (in descending order) 41 cases including burn or moxibustion scar, 32 cases of pain and 15 cases of symptom aggravation.

Discussion. When searching the National Consumer Affairs Center of Japan database, it was not possible to differentiate between Acp, Mox and massage, nor did the database include accident details. The Accident Information Databank, however, provided information from multiple public bodies, including the National Consumer Affairs Center of Japan, which runs a consumer consultation database, and did contain the details, although brief, of accidents.

Conclusion. There was no database that brings together the adverse events in integrated medicine in Japan. The Accident Information Databank, however, does contain adverse events, ranging from slight to severe, related to Acp and Mox, and as such is an important information source.

Acknowledgement. This study was supported by Japan Agency for Medical Research and Development.

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Patient Safety on Periocular Acupuncture Therapy

Ying-Ling Chen¹, Tai-Wei Kuo¹, Mark C. Hou²

¹*TCM Integrated Information Center, Department of Chinese Medicine, Changhua Christian Hospital, 135 Nan-Siao Street, Changhua 500-06, Taiwan*

²*Circle Lab, Department of Chinese Medicine, Changhua Christian Hospital, 135 Nan-Siao Street, Changhua 500-06, Taiwan*

Background. Periocular acupuncture therapy (PAT) is often used on eye disorders. However risks of bleeding and even ocular perforation are concerned.

Objectives. In this study we aimed to review our clinical practice in PAT as well as literature review including ancient classics and modern anatomy to further improve patient safety.

Methods. We retrospectively reviewed TCM ophthalmology outpatient records during January 2009 to May 2014. We analyzed the diseases/ICD-9 that were treated by PAT, the use frequencies of acupoints and the adverse effects happened during PAT. Furthermore we compared the ancient classics, Compendium of Ophthalmology and the modern anatomy to our clinical practice.

Results. 101 patients had received PAT in this period, with a total of 702 visits. Female: male = 1.06: 1. Age distribution displayed a peak at around the 60s, followed by the 50s and 40s. GB1 was the most common acupoint used, followed by BL2, ST2, SJ23, EX-HN7 and BL1. The top three major eye disorders (ICD-9) for PAT visits were tear film insufficiency (375.15), glaucoma associated with ocular inflammations (365.62) and other retinal disorders (362.89). The most common adverse effect of PAT was pain, followed by bleeding and ecchymosis. We found BL1 was the most common acupoint having adverse effects. Depth of periocular acupoints in ancient classics is around 2.5-7.6mm, which is safe compared to eye axial length (23-25mm) in the modern anatomy.

Conclusions. PAT is safe based on the appropriate location and depth of acupoints. It is necessary to raise doctors' awareness of patient safety on PAT.

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Korean medical obesity treatments on localized fat in three Japanese

Yong-ho Lee¹, Nam-gyeong Go², Ji-hyun Lee¹

¹*Onbody Korean Medicine Clinic, Myeongdong 1-4 2nd floor, Namsan-dong 1-ga, Jung-gu, Seoul, South Korea*

²*Onbody Korean Medicine Clinic, Gangnam Dongyang building 5th floor 200-6, Nonhyeon-dong, Gangnam-gu, Seoul, South Korea*

Background. Since more people has been pursuing beauty, taking control of body shape as well as weight loss is fundamental desire. Electro-acupuncture is one of the most popular alternative therapies and is being used in obesity management. Despite many studies has been proved the effect of electro-acupuncture and herbal medicine on obesity, there is no published study targeting foreign patients. We have gained highly promising results including overall weight loss and reduction in thigh circumference in Japanese. Thus, we hope this could make more opportunity to show the efficacy of Korean medical treatment for obesity to the world.

Report. The aim of this study is to report clinical progresses on localized fat in three Japanese with Korean medicine.

We conducted electro-acupuncture on thigh and/or Gamitaeyeumjowi-tang (which is herbal medicine) to three female Japanese who had visited obesity clinic from January 2014 to December 2014. We analyzed changes of body index such as body weight and BMI through bioelectrical impedance analysis. We also measured the thigh circumference with tapeline before and after low frequency electronic stimulation.

Although the first subject who had received only electro-acupuncture gained 0.2kg body weight and 0.7kg body fat, the thigh circumference decreased by 3cm in left, 2.5cm in right. Second and third subjects who were taken both electro-acupuncture and Gamitaeyeumjowi-tang had body weight loss by 2.3kg, 2.5kg and BMI loss by 0.9kg/m², 1.0kg/m² respectively. Also, their thigh circumference decreased by 2.5cm, 3cm in left, 2cm, 2.5cm in right respectively.

Discussion. In a total three of subjects, a reduction was shown in thigh circumference and two subjects who took Gamitaeyeumjowi-tang lost their body weight loss as well. It showed that targeted fat loss can be achieved through Korean medical treatments for Japanese.

Conclusions. Regional body fat distribution affects health-related quality of life negatively and is one of the key variables leading to social and psychological withdrawal. It is believed that the scope of Korean medical treatments will be expanded to the medical management of regional distribution of body fat as well as overall weight loss.

References. Go NG, Lee YH, Min DL. Korean medical obesity treatments on localized fat in three Japanese. J Korean Med Obes Res 2015;15(1):51-54.

Background. According to the Ministry of Health and Welfare all the people health insurance medical service statistics result discovered respiratory system disease all datas to occupy first or second. Asthma and allergic rhinitis and so on allergic the disease presents the tendency which increases year by year. Although, in recent years had the fast progress to understood allergic disease pathogenicity and researches and develops the new medicine, however, the world asthma and other allergic disease prevalence rate, being hospitalized rate and the mortality rate actually continued to advance. Therefore, seeks the curative effect to reveal, the operation is being simple, the moderate price, does not have the pain and the side effect prevention disease occurs methods of treatment to appear its importance.

Objectives. This research governs the theory based on the winter's diseases treat in summer, in view of suffers from contracts the allergic rhinitis and asthma patient carries on the moxibustion paste to paste spreads on acupuncture points at the three periods of greatest heat. Method of treatment expected the affiliation by enhances the immunity ,then achieved the active control and the reduced disease manifest suddenly goal.

Methods. This research in view of the three periods of greatest heat outpatient service patient 557 examples, carries on the acupuncture point by the self-made moxibustion paste to paste spreads, altogether pastes spreads three time is a treatment course. Initially observes its disease category to carry on the overlapping analysis and China and the West medicine treatment situation and symptom improved.

Results. Effectively asked the volume 454 examples, synthesizes this findings to know no matter below the cold and heat

Discussion. physique 50 years old approximately composes above 70%, 1~20 year old occupies 30~40%. And primarily occupies above 80% by the allergic rhinitis, its merge asthma approximately composes above 30%, seeks west medical treatment primarily to have above 40%, the China and the West medicine treatment above 30%, the Chinese medicine treats below 20%.

Conclusions. Questionnaires revealed symptoms improved 62.5%. In alleviating the time to govern the theory based on the winter's diseases treat in summer to carry on the acupuncture point to paste spreads the treatment, this method can slow down the symptom and manifest suddenly the number of times, prevents the disease to occur, therefore the treatment way is worth promoting.

The clinical effectiveness of auricular acupressure using the National Acupuncture Detoxification Association (NADA) protocol for methamphetamine dependent humans: A clinical pilot study

Bernice Lottering^{1,2}, Xuesheng Ma¹, Yi Hung Cheng²

¹*The International Master Program of Graduate Institute of Acupuncture Science, China Medical University (CMU) No. 91, Xueshi Rd, North District, Taichung City, 40402, Taiwan*

²*The School of Natural Medicine, University of the Western Cape (UWC), Robert Sobukwe Rd, Bellville, Cape Town, 7535, South Africa*

Background: The abuse of methamphetamine (MA) has dramatically increased in many countries. There are currently no specific medications for the treatment of MA addicted patients. Recent studies indicated that acupuncture treatment provided potential benefits in various addictions, such as heroin, cocaine and nicotine. However, the rapidly increasing numbers of MA specific addictions are testament to the lack of an effective rehabilitation protocol. Auricular acupressure is a safer and milder form of acupuncture and the efficacy of auricular acupressure on MA addiction has not yet been widely studied.

Objectives. The aim of this clinical pilot study is to investigate whether the auricular acupressure treatment with the protocol of National Acupuncture Detoxification Association (NADA), USA can relieve the anxiety and sleep disorders associated with MA dependence.

Methods. The study was performed at the Kensington Drug Rehabilitation Centre in Maitland, Cape Town, South Africa. MA addicts were included into the study and divided into control group or intervention group without randomization. The control group received psycho-social treatment, while the intervention group received auricular acupressure combined with psycho-social treatment. Auricular acupressure treatment followed the NADA protocol: four auricular points were used; an ear seed was placed to each auricular point. Each point is stimulated individually for 1 minute, making a total of 4 minutes to complete one session. Four sessions were scheduled every day for 5 weeks. The Beck Anxiety Inventory (BAI) was adopted to evaluate the severity of the symptoms associated with depression, while Pittsburgh Sleep Quality Index (PSQI) was adopted to evaluate the sleep quality.

Results. Eight subjects in control group and 35 subjects in intervention group completed the whole treatment and were included into analysis. The BAI and PSQI scores after 5-week treatment in intervention group were both significantly higher after 5-week treatment compared to control group. Multiple regression with non-linear variables was employed to show a direct correlation between duration of use and treatment effect.

Discussion. The results indicated a significant P value in both the BAI and PSQI differences between control and intervention groups. This demonstrates that the acupressure is effective in alleviating the symptoms of the anxiety and sleep disorders associated with MA. Multiple regression with non-linear variables indicated that a participant recovering from a long term duration of dependence experienced a greater effect in the treatment.

Conclusions. In this pilot clinical study, acupressure treatment with the protocol of NADA relieves the anxiety and sleep disorders associated with MA dependence. These results warrant future large-scale randomized controlled trials.

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Safe needling depths of upper back acupoints in children

Yi-Chun Ma¹, Jaung-Geng Lin², Ching-Tien Peng³, Yu-Chuen Huang², Hung-Yi Lin³

¹*Graduate Institute of Chinese Medicine, China Medical University, Taiwan, ROC*

²*School of Chinese Medicine, College of Chinese Medicine, China Medical University, Taiwan, ROC*

³*Children's Hospital of China Medical University, Taiwan, ROC*

Background. Acupuncture is applied for treating numerous conditions in children, but few studies have examined the safe needling depth of acupoints in the pediatric population.

Objectives. In this study, we investigated the depths to which acupuncture needles can be inserted safely in the upper back acupoints of children and the variations in safe depth according to sex, age, weight, and body mass index (BMI).

Methods. We retrospectively studied computed tomography (CT) images of patients aged 4 to 18 years who underwent chest CT at China Medical University Hospital between December 2004 and May 2013. The safe depths of upper back acupoints in the Governor Vessel (GV), Bladder Meridian (BL), and Small Intestine Meridian (SI) were measured directly from the CT images. The relationships between the safe depths of these acupoints and sex, age, body weight, and BMI were analyzed.

Results. The results indicated significant differences in safe needling depth between boys and girls in most upper back acupoints, except at BL42, BL44, BL45, and BL46. Safe depths differed significantly depending on age ($p < 0.001$), weight ($p \leq 0.01$), and BMI ($p < 0.05$). Generalized linear regression analysis revealed that weight was the most crucial factor in determining the safe depth.

Discussion. Different amount and distributions of muscle mass and fat could explain the difference of safe depth between the sexes. Thicker fat or muscle tissue layers in heavier children may explain significant differences of safe depths between weight and BMI groups.

Conclusions. Sex, age, weight, and BMI are relevant factors in determining the safe needling depths of upper back acupoints in children. Physicians should pay attention to wide variations in needle depth when performing acupuncture.

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20 cases of warts treated by Saengki SBT (Self Balancing Therapy)

Chi-Young Park¹, Ok-Heui You¹, Gi-Chan Lee¹, Eun-Mi Kim¹, Jung-Jeh Yoon²,
Sung-Moon Song³, Dae-Woong Jung⁴

¹*Saengki Oriental Medical Clinic Seocho, #205, 207, 1685-8, Seocho-dong,*

Seocho-gu, Seoul, South Korea

²*Saengki Oriental Medical Clinic Busan, #310, 311, Centum Hotel, Woo-dong,*

Haeundae-gu, Busan, South Korea

³*Saengki Oriental Medical Clinic Changwon, 3F, Samgwang Bldg, 103,*

Sangnam-dong, Seongsan-gu, Changwon, Gyung-sangnam-do, South Korea

⁴*Saengki Oriental Medical Clinic Nowon, 4F, 341-5, Sanggye-dong, Nowon-gu,*

Seoul, South Korea

Background.

Viral Warts are common viral infections. They are generally treated by laser ablation or cryotherapy in Western Medicine, but in many cases, they recur.

Objectives.

This study was carried out to report the effect of Saengki SBT for warts.

Saengki SBT consists of 4 methods of Traditional Korean Medicine treatment. (herbal medicine, yakchim, acupuncture, moxibustion)

Methods.

We conducted statistics study on 20 patients with warts, who had visited to Saengki oriental medical clinic from January of 2013 to October of 2014.

All patients were treated by Saengki SBT.

Results.

After Saengki SBT, judging by photographs, all of the lesions of patients' were disappeared. Also there were no sign of recurrence after 1 year.

Discussion.

We could confirm that warts' lesions were evidently reduced in shortly 6 weeks, lately 28, treated by Saengki SBT.

Conclusions.

This study shows that Saengki SBT with herbal medicine was effective to treat warts

Effect of acupuncture on cerebral blood flow in patients with migraine measured by arterial spin labeling MRI method.

Tomokazu Kikuchi¹, Satoru Yamaguchi¹, Nobuo Araki², Hiroshi Matsuda³, Kengyo Honda⁴

¹*Department of Oriental and Integrated Medicine,* ²*Department of Neurology,* *Saitama Medical University* ³*Department of Radiology, Medical* ⁴*Center, Integrative Brain Imaging Center, National Center of Neurology and Psychiatry (NCNP)*

Background. Because the effect of acupuncture for migraine does not differ from that of treatment with standard preventive drugs or placebo acupuncture, its specific effects have been questioned. However, physiologic activation has been observed also with placebo acupuncture, and some researchers now consider that stimulation on skin and muscle have been compared.

Objectives. To compare the effects of acupuncture stimulation on cerebral blood flow in patients with migraine (patients) and healthy adults (controls) using Arterial spin labeling (ASL) MRI without contrast material, and to clarify the mechanism of action of acupuncture in patients with migraine. Besides, we aim to clarify that responsiveness of each parameter to acupuncture differs between patients and controls (the characteristic of acupuncture), that acupuncture improves symptoms and that responsiveness becomes similar to that of controls, which in turn contributes to the improvement of symptoms.

Methods The subjects were 10 patients who met the diagnostic criteria of the International Classification of Headache Disorders; 2nd Edition [3 males and 7 females, mean age: 39.2 ± 11.2 years (mean ± S.D.)] and 10 controls (6 males and 4 females, mean age: 32.3 ± 9.2 years). The sites of acupuncture stimulation included ST8 located slightly superior to the bulge of the temporalis muscle, ST6 located anterior and superior to the angle of the jaw at the prominence of the masseter muscle, GB21 located in the upper trapezius muscle, and GB12 located in the splenius muscle. Acupuncture was performed using nonmagnetic silver needles (diameter: 0.2 mm, length: 50 mm) for 10 minutes. The method for measuring cerebral blood flow was as follows: 3T MRI (Siemens' MAGNETOM Verio) was used and the pulsed ASL method was employed. The patients were allowed to rest for 30 minutes or more and then cerebral blood flow was measured between attacks 6 times, for 4 minutes each time; namely, before stimulation, 5 minutes after start of stimulation, 10 minutes after start of stimulation, immediately after its completion, and 15 and 30 minutes after its completion. The cerebral blood flow images obtained were statistically analyzed by Statistical Parametric Mapping to compare the images at rest and thereafter. The images at rest in patients and controls were also evaluated

Results. Both in patients and controls, blood flow in the pars opercularis or cingulate gyrus, islet and thalamus/hypothalamus increased 5 and 10 minutes after start of stimulation. However, the increase was more prominent in patients. Furthermore, the increase of blood flow at the same sites persisted longer immediately after, and 15 and 30 minutes after stimulation in patients than in controls. In addition, blood flow specifically increased in the anterior part of the parietal lobe of patients.

Conclusions. The results of this study suggested a difference in responsiveness to acupuncture stimulation in patients and controls.

P-127 The effect of point stimulations with tuning forks

Yoshiko Naito¹, Hidetoshi Yamaguchi², Takanori Matsuoka^{3,4}, Tsukasa Fueki^{3,5}

¹*Naito Acupuncture and Moxibustion Clinic, 753-5 Motai Tateshina-machi, Kitasakugun, Nagano, 384- 2211, Japan;* ²*Yanagihara Acupuncture and Moxibustion clinic, 2090-10, Yanagihara, Nagano-city, Nagano, 381-0012, Japan;* ³*Department of Traditional Medicine, Toho University school of medicine, 5-21-16 Omori Nishi, Ota-ku, Tokyo, 143-8540, Japan;* ⁴*Public Interest Corporation Kenikai, 5-3-8 Ginza, Chuo-ku, Tokyo 104-0061, Japan;* ⁵*Matsuya Pharmacy, 2927-5 Maki-kou Nishikan-ku, Niigata, Niigata, 953-0041, Japan*

Background. This paper is an attempt to use the idea of mutual sympathy of heaven and men in Taoism, which is a backbone in the basic books of Traditional Chinese Medicine such as “Suwen” and “Lingshu”, in the therapeutic acupuncture. “Chunqiu fanlu”, which is one of the representative classic Taoism books, says “Same Qi assemble together. Same notes resonate together. These reactions are clear. Let’s play the well-tuned harp for a test. If a note of C is played, another C sounds in harmony. If a note of D is played, another D sounds in harmony. The notes of pentatonic scale sound spontaneously.” The resources are explained with the principle of the mutual sympathy of heaven and men in Taoism, as harmony of sounds in the ancient times in China.

Objectives. We report two cases in which the therapeutic effects of the notes generated by the tuning forks, in accordance with human organs, were observed.

Methods. We searched the difference of the cord that gave the effect to the human organ. And the acupuncture points along one Meridian were stimulated by the tuning forks which generate the notes in accordance with the human organs. The photographs were taken and the changes of the patient’s bodies were estimated.

Results. The both cases were cured of deformation of their spines. And their bodies became equal on both sides.

Discussion. Assuming the theory that man is an integral part of nature, Qi of men and Qi of the nature made a system that resonated as written in “Zhuangzi”. We recognized that the interaction of Qi was between inside the human body and outside in nature was promoted by the stimulations to the effective points which correspond to five organs with the tuning forks with five notes in accordance with them.

Conclusions. The treatment in “Suwen” and “Lingshu” was the modulation of Qi. It is important for the motion of Qi to intake Qi of nature as well as the motion and regulation in human body. The treatment used the tuning forks was effective. It may activate the natural healing power.

P-128 The selection of the acupuncture points for febrile disease

Hidetoshi Yamaguchi¹, Takanori Matsuoka^{2,3}, Tsukasa Fueki^{2,4}, Yoshiko Naito⁵,
Shigehisa Adachi⁶

¹*Yanagihara Acupuncture and Moxibustion clinic, 2090-10, Yanagihara, Nagano-city, Nagano, 381-0012, Japan,* ²*Department of Traditional Medicine, Toho University school of medicine, 5-21-16 Omori Nishi, Ota-ku, Tokyo, 143-8540, Japan,* ³*Public Interest Corporation Kenikai, 5-3-8 Ginza, Chuo-ku, Tokyo 104-0061, Japan,* ⁴*Matsuya Pharmacy, 2927-5 Maki-kou Nishikan-ku, Niigata, Niigata, 953-0041, Japan;* ⁵*Naito Acupuncture and Moxibustion Clinic, 753-5 Motai Tateshinamachi, Kitasaku-gun, Nagano, 384-2211, Japan;* ⁶*WakonkansaiShinkyuu, 12-4, Chiyoda Minamicho, Kawachinagano-shi, Osaka, 586-0018, Japan*

Background. In traditional medicine, the medical examination of the back as well as the abdomen is the important clinical examination. Yuxues of the Organs in the back are generally used for the medical examination in acupuncture. However there are also rebingqixue in the back, described in cirelun of Suwen, whose positions corresponding to Organs are different from those of Yuxues of the Organs. There are confusions in the positions of acupuncture points between the commonly accepted theories and the descriptions in classic books.

Objectives. There were many books in ancient time in China. The positions of same-named acupuncture points in these books were often different from each other, in especially febrile disease. So, we tried to confirm the difference of the acupuncture points in the back by organized data in each period.

Methods. We searched for various books; Suwen, Lingshu, Taisu, Jiayijing, the papers and scrolls in Dunghua and Taipingshenhuifang. The positions of acupuncture points for febrile disease in each books were compared and examined.

Results. Normal counting method in Oriental medicine started from the 7th Cervical bone, the position of “Dazhui”, generally. However the position of “Dazhui” was found in the upper area of the 7th Cervical bone, around the point of “Fengfu”, in “Taipingshenghuifang”. Also the positions of rebingqixue corresponding to organs were found in the upper area than those of Yuxues of the Organs.

Discussion. The healing points in the febrile disease were found to be generally changed to upper points. These tendencies to change upper points for treats were found in ancient time in China. So, we thought that there were some possibilities that it was important for cervical points to be treated.

Conclusions. There is a few healing point in neck on modern acupuncture theory. It however, is significant to check and to stimulate the healing points in the neckclinically.

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The effects of season and plant height on the constitution of the fruits according to the circle theory

Shih-chin Wei³, Juntan Chang², Mark C. Hou¹, Yuan-Chun Lo¹

¹*TCM Integrated Information Center, Department of Chinese Medicine, Changhua Christian Hospital, 135 Nan-Siao Street, Changhua 500-06, Taiwan*

²*China Medical University*

³*I Shou university The School of Chinese Medicine for Postbaccalaurate*

Background. Peng proposed circular motion theory, which is the application of the theory of the rise and fall of yang qi in the four seasons according to Huangdi Neijing ("The Inner Canon of Huangdi")

Objectives. In summer, yang qi rises above the ground surface. According to this theory, fruits from high trees that bear summer fruits have hot characteristics

Methods. According to Suixiju yinshipu, this study involved 20 cold- and hot-characteristic fruits for quantitative ranking and observation in terms of two factors relative to circular motion theory (i.e., fruiting season and plant height) as well as five factors related to fruit constitution (i.e., latitude, color, calorie content, water content, and sugar content). A multiple regression model was established to evaluate the effect of these factors on the cold and hot attributes of fruits.

Results. The results show that 75% of the selected fruits accorded with circular motion theory

Discussion. However, the fruiting season and plant height did not significantly affect fruit constitution.

Conclusions. Circular motion theory might explain the cold and hot attributes of fruits.

To assess drug side effects in traditional Chinese medicine theory

Jian-Ruei Ciou¹, Ling-Shuo Chang¹, Yu-Hung Chen¹, Hen-Hong Chang²,

¹*School of Chinese Medicine, College of Chinese Medicine, China Medical University, No.91, Hsueh-Shih Road, Taichung, Taiwan*

²*School of Chinese Medicine, and Research Center for Chinese Medicine & Acupuncture, China Medical University, Taichung, Taiwan*

Background. Quinine preparation as an immune-modulator, is widely used in treating rheumatic diseases. According to its instruction, the most common side effects are: skin rash, hair loss, nausea, stomach pain, diarrhea and vomiting, etc. Patients experienced related side effects, and reduce their quality of life after taking the drug. When patients taking traditional Chinese medicine(TCM), their symptoms gradually disappeared. If the side effects of quinine can be improved by TCM, the integrative medicine should be able to enhance the quality of healthcare.

Objectives. To investigate the side effects of quinine preparation and its medicinal properties in TCM

Methods.

1. We review documents to explore the pharmacological mechanism of pharmacology and side effects of quinine preparation. And then, we discuss these side effects to organs according to Chinese medical theory, and the pattern of TCM viscera dysfunction.
2. From clinical case reports of patients with specific constitutions, we analyze the side effects after they take quinine preparation and summarize the treatment experience.

Results. We analyze common side effects of quinine preparation with TCM theory, the most frequent TCM patterns are spleen vacuity, yin vacuity and blood vacuity. After taking TCM preparation (stopping quinine preparation or not), patients can reduce stomach pain, diarrhea, vomiting and other gastrointestinal symptoms (splenic fortification), or improve fever, diplopia, dry eyes, tinnitus and other symptoms (supplement yin).

Discussion. Quinine preparation was frequently used to regulating the immune function in rheumatology, but the patients with specific constitutions cause some side effects easily. At the same time the use of TCM may be able to improve their symptoms under the guidance of TCM diagnosis.

Conclusions. The side effects of quinine preparation may be improved by TCM, the integrative medicine should be able to enhance the quality of healthcare.

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Investigation of characteristics of traditional Chinese medicine constitutions in patients with angina

Yi-Chia Huang^{1,2}, Yi-Chang Su¹

¹*Graduate Institute of Chinese Medicine, College of Chinese Medicine, China Medical University, Taichung 40402, Taiwan R.O.C.*

²*Department of Traditional Chinese Medicine, Taichung Veterans General Hospital, Taichung 40705, Taiwan R.O.C.*

Background. Coronary artery disease (CAD) is the most frequent cause of cardiovascular mortality. When patients suffer from chest pain or angina, cardiac catheterization may be required to diagnose CAD. However, stenosis of coronary artery is not always presented. Constitution is a relative stable condition of human body and can be applied to evaluate patients in state of subhealth, subdisease, or predisease. Understanding the characteristics of traditional Chinese medicine (TCM) constitutions in patients with angina can provide reference for clinicians to make individual therapeutic strategies.

Objectives. To investigate differences of TCM constitutions characteristics between patients with and without CAD.

Methods. A total of 195 patients (147 male, 75.4%) who received cardiac catheterization because of angina were recruited from 2011/6/29 to 2012/12/31 in medical centers in Northern Taiwan. CAD was diagnosed by CV specialist with coronary angiograms. TCM constitutions were assessed by Body Constitution Questionnaire (BCQ) before receiving cardiac catheterization. BCQ consists of 44 items which are subjective symptoms and signs grouped into 3 parts: BCQ+, BCQ- and BCQs to respectively measure *Yang-Xu*, *Yin-Xu* and *Stasis* constitution tendency by calculating the total scale score of each part. The three TCM constitutions respectively consist of 5, 5 and 4 factors to measure different area conditions of body.

Results. The mean age of all patients was 59.79±13.06 years old. CAD was present in 153 patients (78.4%). The 14 factors of TCM constitutions in patients with and without CAD were calculated. We find the significant difference of scale in factor 2 of *Yang-Xu* (8.40±3.409 and 8.60±3.696, $p=0.02$, OR 1.336) and factor 1 of *Yin-Xu* (11.28±3.953 and 12.62±4.472, $p=0.01$, OR 0.783).

Discussion. In TCM theories, the pathophysiology of angina is not only including the change of cardiovascular system but the fluctuation of *Yang-Qi* and *Yin-Blood*. So we can see the change in factor 2 of *Yang-Xu* (*Yang-Xu* in the chest) and factor 1 of *Yin-Xu* (*Yin-Xu* in the head).

Conclusions. This is the first study to measure the TCM constitution in patients with angina by BCQ. The result in our study provided reference for clinicians making individual therapeutic and preventive strategies for patients with angina.

Keywords. Coronary artery disease (CAD), Body Constitution Questionnaire (BCQ), TCM constitution

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Treatment using herbal patches on acupoints in alleviating paralytic ileus

Lih-Lian Chen^{1,2}, Ching-Jen Huang¹, Mei-Hsien Lee^{2,3*}

¹*Department of Traditional Chinese Medicine, En Chu Kong Hospital, New Taipei city 237, Taiwan*

²*Ph. D. Program for the Clinical Drug Discovery from Botanical Herbs, Taipei Medical University, Taipei 110, Taiwan*

³*Graduate Institute of Pharmacognosy, College of Pharmacy, Taipei Medical University, Taipei 110, Taiwan*

Background.

Paralytic ileus refers to obstipation and intolerance of oral intake because of abnormal coordinated propulsive motor activity of the gastrointestinal tract, commonly follows some types of surgery, especially abdominal surgery. The principal symptoms of paralytic ileus are abdominal distention, diffuse and persistent abdominal pain, nausea and/or vomiting, constipation. Those makes patients discomfort, debilitating and prolonged hospitalization. In traditional Chinese medicine, there were many outstanding herbal prescriptions that exhibited potential efficacy of coordinating peristalsis, relieving flatulence, and defecation.

Objectives.

No studies have identified any specific therapy, other than supportive care, to resolve prolonged paralytic ileus. Therefore, we treat postoperative paralytic ileus with herbal patch “MBW104” on acupoints to lessen days in hospital and facilitate food intake.

Methods.

Patients diagnosed as postoperative paralytic ileus, excluding mechanical ileus such as bowel obstruction, perforation, intraabdominal abscess, or retroperitoneal bleeding were enrolled in the study. Herbal patch, MBW104, is prepared from two to five raw herb powders mixture in particular ratio, then pasted on bilateral acupoints, ST36, ST37, ST38 at 7:00-9:00 AM. Intervals of herbal treatment, days in hospital, the first time for stool passage and oral intake were recorded.

Results and Discussions

Eight male and two female patients accepted herbal patch treatment. Among these patients, 8/10 clinical symptoms were greatly improved. Compared to patients without treatment of herbal patch, duration of using nasogastric tube decompression was shorter, and they started oral intake with liquid food diet earlier. Shortening of hospitalization period was accomplished.

Conclusions

The herbal patch “MBW104” may contains several kinds of essential oil, and polyphenols, which can promote bowel motility and relieve the symptoms of paralytic ileus.

Fumiko Nishimori^{1,3}, Yoshizumi Matsukawa^{2,3},

¹Nishimori Naonote Clinic, Tsukaguchihonmachi1-3-1, Amagasaki, Hyogo, Japan

²Matsukawa lin, Banbacho1-2-103, Nishinomiya, Hyogo, Japan

³Hyogo Prefectural Amagasaki General Medical Center, Higashinaniwacho2-17-77, Amagasaki, Hyogo, Japan

Background. Ogikenchu-to (黄耆建中湯) is one of the formulae described in Keppikyorobyohen (血痺虚劳病篇) of Kinkiyoryaku (金匱要略), a famous Kampo textbook. It is composed Ogi (黄耆) and Kenchu-to (建中湯). Ogi (黄耆) is a herbal medicine widely used in Orthopedic diseases. Kenchu-to (建中湯) is a popular formula used for fatigue and for deficiency of Kiketsu (気血). We applied Ogikenchu-to (黄耆建中湯) to the treatment of backache with fatigue, and obtained the good efficacy.

Case1. 52y.o. M. He had been suffering from lumbago for ten years or more. General fatigue aggravated his pain inevitably. We prescribed Ogikenchu-to (黄耆建中湯), 3 g of extract form. The back pain improved immediately after internal use on the day. About two months later, the continuation of the drug (once a day), attenuated his left arthropathy of the first carpus metacarpal bone joint (CM arthropathy). **Case2.** 59y.o. F. She had felt upper / lower back pains, dullness and numbness whenever she had finished wide floor cleaning. We prescribed Ogikenchu-to (黄耆建中湯), 6g of extract form. For six months of internal use continuation (twice a day), all of her back symptoms decreased gradually and finally disappeared. **Case3.** 58y.o. F. She had felt low back pain, when she got exhausted. We prescribed Ogikenchu-to (黄耆建中湯), 3g of extract form. She took medicine by dissolution in hot water and promptly her back symptoms improved and disappeared.

Discussion. General fatigue causes numerous physical and mental disorders. Physical fatigue may induce muscle fatigue, and mental fatigue may cause body muscles stiffness in the shoulder, neck and back. These fatigue and stiffness induce various pains. We report several clinical cases whose back pains were improved by Ogikenchu-to (黄耆建中湯). It is one of formulae (described in Keppikyourobyohen (血痺虚劳病篇) of Kinkiyoryaku (金匱要略), a famous Kampo textbook. This prescription is generally used in abdominal pain with Kiketsu (気血) deficiency which induces Fuei (不栄). Fuei (不栄) results in pain and this phenomenon is called FueisokuTsu (不栄則痛). We applied Ogikenchu-to (黄耆建中湯) to treatment of back pain with fatigue. This usage of this formula suggested high efficiency for back pain with fatigue.

Conclusions. Ogikenchu-to (黄耆建中湯) was very effective for upper and lower back pain.

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An online survey of adverse events of electroacupuncture in Korean

Eun Kyung Bae¹, Jeong Hwan Park¹, Sungha Kim^{1,2}, Sanghun Lee^{1,2},

¹*Korea Institute of Oriental Medicine, 1672 Yuseong-daero, Yuseong-gu, Daejeon 34054, Republic of Korea*

²*Korean Medicine Life Science, University of Science & Technology, 217 Gajung-ro, Yuseong-gu, Daejeon, 34113, Republic of Korea*

Background. Electroacupuncture (EA) is one of the modernized acupuncture techniques to deliver electrical stimulations through inserted acupuncture on specific acupoint or trigger point to reduce pain. However, some research reported the danger of material corrosion and residual of acupuncture needle after electrical stimulation. Due to the electrical properties EA poses safety problems that are distinct from those of traditional acupuncture.

Objectives. In this study, we aimed to collect the cases of adverse events (AEs) of EA from Traditional Korean Medicine Doctors (KMDs) by web-based survey.

Methods. Using online survey, 17,550 KMDs registered in the Association of Korean Medicine conducted the questionnaires between April and July 2014. Questionnaires included the experience on AEs of EA (total numbers of event, frequency), each condition (used EA stimulator and its parameters; pulse intensity, frequency, time), acupuncture needle, acupoint, and etc.

Results. Questionnaires were completed by 885 KMDs. Two respondents were excluded. Of 841 respondents (95.0%) usually used EA. Of 254 responders (28.7%) had experiences on AEs of EA. Three hundred thirty four cases of AEs of EA were collected. General AEs were reported in pain 151 cases, bruised 49 cases, flare 32 cases, dizzy, nausea 29 cases, Bleeding 16 cases, Itchy 15 cases, etc. 10 cases. Specific AEs of EA were also reported. Bending acupuncture needle 24 cases, broken acupuncture needle 4 case and burn 4 cases.

Discussion. Although it is hard to classify the general AEs and special AEs which were most probably caused by electrical stimulations on acupuncture needles, some AEs has shown the relationships between the needle insertion point and its electrical parameters. In addition, uncompleted coating on needle was considered as reason of broken. As an aspect of safety, safe range of parameters of EA and test method for needle to use EA stimulator are important.

Conclusions. EA is useful but it needs to be carefully used. Appropriate range of electrical parameters should be determined for safety issues.

P-135**Clinical research trend for integrative medicine in korea; A systematic review**

Byung-Jun Kim, K.M.D., In Heo, K.M.D., Kwang-Ho Heo, K.M.D. *, Man-Suk

Hwang, K.M.D. and Byung-Cheul Shin, K.M.D. *, Eui-Hyoung Hwang, K.M.D. *

Department of Rehabilitation Medicine of Korean Medicine, Pusan National University Korean Medicine Hospital.

Division of Clinical Medicine, School of Korean Medicine, Pusan National University

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Background.

In Korea, 'Integrative Medicine' means the cooperation between two different medical systems Korean and western medicine and further indicates Korean, western, and complementary and alternative medicine are approaching as a whole one medical system.

Objectives

The aim of this study is to investigate the current status of clinical research of integrative medicine in Korea by systematic review manner.

Methods

We investigated the clinical researches on integrative medicine via searching 4 Korean electronic databases. All relevant clinical researches either clinical trials or observational studies were selected following inclusion criteria and data were extracted to be analyzed according to participants/patients, interventions, comparators, institution studied funding and study design.

Results.

Only 4 studies including 3 non-randomized controlled trials and 1 case study were published. Their type of integrative medicine was generally based on western medicine. Only one non-randomized controlled trial was supported by research funding.

Discussion.

Few prospective or controlled clinical trials were published with generally low quality. In the future well designed clinical trial should be conducted with funding source.

Conclusions.

For developing the integrative medicine quantity and quality of research, we expect that this study is able to give benefits the future research about integrative medicine.

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Cancelled

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Treatment of acute flare of atopic eczema after long-term remission using Chinese herbal medicine.

AKIYOSHI YAMANAKA¹, YUKIO KANEKO², TATEHIKO FURUHASHI³, SATOSHI MASUZUGAWA⁴

¹*YURIGAOKA CLINIC 1, 1-14 Yurigaoka Higashi Nabari City, Mie, Japan*

²*KANEKO CLINIC 2, 12-3 Sanada building 2nd floor, Nishimarunouchi, Tsu City, Mie, Japan.* ³*Mie Prefectural Shima Hospital, 1284-1 Sakazaki, Isobe-cho, Shima City, Mie, Japan.* ⁴*Masuzugawa Neurology Clinic 817-3 Inoji Kecho Suzuka, Mie, Japan.*

Background. Sixty percent of patients with Atopic Dermatitis will experience flares and remissions throughout their lives. Patients with Atopic Dermatitis may experience recurrences after anywhere between several months to a dozen or so years. In these cases treatments are often refractory. In this study refractory Atopic Dermatitis patients were successfully treated using Chinese herbal medicine.

Objectives. Two adult males aged 43 and 21, and two adult females ages 26 and 32. The course time of recurrence was from 8 months to 12 years.

Methods. Refractory recurring Atopic Dermatitis was diagnosed in all subjects and subsequently treated and cured using Chinese herbal medicine. In addition, during the duration of treatment, no steroids or immunosuppressive drugs were used.

Results. The duration of treatment was from 6 to 15 months. Treatment was completed in all patients. Patients were identified by using traditional Chinese medicine, they all showed association with kidney vacuity.

Discussion. We often cannot control acute flare of Atopic Eczema, after long-term remission, without intensive treatments using steroids or immunosuppressive drugs. Subsequently, acute flares have to be controlled with steroids or immunosuppressive drugs for a long term. When we use steroids or immunosuppressive drugs for a long term, patients come to suffer from side effects. This study showed that we can cure acute flares by using Chinese herbal medicine with no side effects. Therefore we did not use steroid or immunosuppressive drugs during patient treatment in this study.

Conclusion: In this study we have shown that the subsequent course of Atopic Eczema did not last for a long time if treated only with traditional Chinese medicine.

Upper gastrointestinal bleeding with blood and energy deficiency of small intestine and stomach meridians

Yu-Chiang Hung MD PhD, Ying-Jung Tseng MD, and Wen-Long Hu MD MS

Department of Chinese Medicine, Kaohsiung Chang Gung Memorial Hospital and School of Traditional Chinese Medicine, Chang Gung University College of Medicine, Kaohsiung, Taiwan

Background. Electrodermal screening (EDS) was developed from the theory of electroacupuncture according to Dr. Voll. By EDS, the body's electrical energy can be measured as the electrical resistance of the biologically active acupoints (BAPs) on meridians.

Objectives. The purpose of this case-control study was to investigate the relationship between the electrical resistance of the skin at BAPs on the main meridians and upper gastrointestinal bleeding (UGIB).

Methods. Electrical resistance to direct current at 20 BAPs on the fingers and toes of 100 patients with (38 men, 12 women; 58.20 ± 19.62 years) and without (27 men, 23 women; 49.54 ± 12.12 years) UGIB were measured through EDS. Data were compared through analysis of variance (ANOVA), receiver operating characteristic (ROC) curve analysis, and logistic regression.

Results. The initial readings were lower in the UGIB group. Indicator drop values were observed significantly at nine BAPs ($p < 0.05$) on the bilateral small intestine, bilateral stomach, bilateral circulation, bilateral fibroid degeneration, and right lymph meridians. The area under the ROC curve values of the BAPs on the bilateral small intestine and stomach meridians were larger than 0.5. Logistic regression analysis revealed when the indicator drop of the BAP on the left stomach meridian increased by one score, the risk of UGIB increased by about 1.545–3.523 times.

Discussion. These results would reveal blood and energy deficiency due to UGIB and suggest the diagnostic accuracy of EDS for UGIB on the basis of the indicator drop of these BAPs. We found significantly different values of UGIB for the BAPs on the stomach and small intestine meridians. The more indicator drop values, the more risk of UGIB.

Conclusions. The change in the electrical resistance of the skin measured by EDS at the BAPs on the bilateral small intestine and stomach meridians provides specific information as energy deficiency on UGIB.

References. Tseng YJ, Hu WL, Hung IL, Hsieh CJ, Hung YC. Electrodermal Screening of Biologically Active Points for Upper Gastrointestinal Bleeding. *Am J Chin Med.* 2014;42(5):1-11.

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Identification of tongue and pulse indices which related to abnormal constitution

Shan-Yu Su^{1,2}, Hung-Jen Lin¹

¹*Department of Chinese Medicine, China Medical University Hospital, No. 2 Yuh-Der Road, Taichung, Taiwan 40447*

²*School of Post-baccalaureate Chinese Medicine, College of Chinese Medicine, China Medical University, No.91, Hsueh-Shih Road, Taichung, Taiwan 40402*

Background. Tongue inspection and pulse palpation are two important diagnosis methods in traditional Chinese medicine (TCM). However, whether tongue indices and pulse indices correlate with constitution, which is diagnosed from inquiry, is not clear.

Objectives. The aim of this study was to find correlation between tongue and pulse indices and constitution, and identify tongue and pulse indices for the nine constitutions.

Methods. A total of 149 healthy volunteers have been recruited. Tongue indices, including tongue color value, were measured from photographs of the tongue. Pulse indices were measured from pulse pressure waveform of the radial artery. Scores of the nine constitutions were measured using the Nine-Constitutional Scale. The association between scores of the eight abnormal constitutions and indices of the tongue and pulse diagnosis were tested by Pearson correlation analysis. The present study was approved by the Institutional Review Board of CMUH.

Results. Scores of Yang deficiency constitution was positively correlated with the number of stasis dots and the brightness value in the HSb color model, but it was negatively correlated with pulse pressure of the main wave and one-minute systolic area. Scores of Wet-Heat constitution was positively correlated with the number of red dots and the scalloped ratio of tongue periphery, while it was negatively correlated with rapid ejection time of the pulse waveform. Blood stasis constitution was positive correlated with the color values of Green and Blue in the RGB model. Yin deficiency constitution was positively correlated with the number of red dots on the tongue surface. The score of Special Diathesis constitution was positively correlated with the Blue value of the tongue surface, while it was negatively correlated with the rapid ejection time in the pulse waves. Score of qi-depression was positively correlated with scalloped ratio of the tongue periphery.

Discussion. This study identify relevant tongue and pulse indices for the eight abnormal constitutions. Each of the eight abnormal constitutions had its correlated tongue and pulse indices, implying those indices are the most important objective diagnostic basis.

Conclusions. The identification of these objective indices for abnormal constitution will help in the development of an autonomic constitution diagnosis system in future work.

P-140 A pilot study on developing the pulse diagnosis Instrument from a research of preload pressure setting

Yun-Ning Tsai,^{1,2,3}, Tsai-Chung Li¹, and Yi-Chang Su¹

¹*Graduate Institute of Chinese Medicine, College of Chinese Medicine, China Medical University, Taichung 40402, Taiwan, R.O.C.*; ²*Chander Clinic, Taipei, Taiwan, R.O.C.*; ³*Tri-General Service Hospital, Taipei, Taiwan, R.O.C.*

Background. TCM pulse diagnosis is very important in clinical operation. Thus, the standard definition of pulse wave has become the unavoidable issue. The objective methods of “Preload Pressure Setting” for a pulse diagnosis instrument had not been resolved yet. Thus, the pulse wave diagram and subsequent analysis results are still questionable.

Objectives. We tried to establish the standardized operation protocol for taking the upper and lower border of the radial pulse, and recorded the pressure we applied to take the pulse with a help of measuring device. It might establish a pressure database for further research of “Preload Pressure Setting” for the pulse diagnosis instrument development.

Methods. We divided 68 healthy college students into two groups according to the gender. One group contained 34 males, and the other contained 34 females. A “Preload Pressure Measuring Device”, containing the two main parts of “pressure pad” and “measurement stage”, was applied when the physician taking the pulse over the pulse area of “Tsun-Kou” including “Tsun, Guan and Chi” on both wrists. The targets to take the pulse were the “plane S” which referred to the upper border and the “plane D” which referred to the lower border of the pulse. The physician took the pulse by a “Standardized Operating Protocol” and the research assistant recorded the pressure value when the physician obtained the pulse.

Results. The result showed that the pressure of the “plane S” ranged from 0 to 11.82 mmHg, and the pressure of the “plane D” ranged from 0.37 to 199.77 mmHg. The gender factor was statistically related to the pressure.

Discussion. Multiple modern studies had not made a database of the pressure of “plane S” and “plane D”, but directly set the preload pressure to take the pulse. According to the results from this study, it did not meet the objective and scientific principles.

Conclusions. The study established an objective model of “Preload Pressure Setting” as the pilot explore for the development of the pulse diagnosis instrument. The further extensive test should be done to identify the accurate preload pressure, thus, the invention of the pulse diagnosis instrument will be more credible.

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SEED: the six excesses (Liu Yin) evaluation and diagnosis scale

Pei-Jung Chiang^{1,2}, Tsai-Chung Li³, Chih-Hung Chang⁴, Li-Li Chen^{5,6}, Jun-Dai Lin⁷
and Yi-Chang Su¹

¹Taichung Veterans General Hospital, 1650 Taiwan Boulevard Sect. 4, Taichung, 40705, Taiwan; ²Graduate Institute of Chinese Medicine, China Medical University, No.91 Hsueh-Shih Road, Taichung, 40402, Taiwan; ³Graduate Institute of Biostatistics, China Medical University, No.91 Hsueh-Shih Road, Taichung, 40402, Taiwan; ⁴Feinberg School of Medicine, Northwestern University, 750 N. Lake

Shore Drive, Suite 601, Chicago, IL 60611, USA; ⁵School of Nursing, China Medical University, No.91 Hsueh-Shih Road, Taichung, 40402, Taiwan; ⁶Department of Nursing, China Medical University Hospital, No.2, Yude Rd., North Dist., Taichung, 40447, Taiwan; ⁷Department of Healthcare Administration, College of Medical and Health Science, Asia University, 500, Lioufeng Rd., Wufeng, Taichung, 41354, Taiwan

Background. Infections such as common colds, influenza, acute upper respiratory infections, bacterial gastroenteritis, and urinary tract infections are usually diagnosed according to patients' signs and symptoms.

Objectives. This study aims to develop a scale for the diagnosis of infectious diseases based on the six excesses (Liu Yin) etiological theory of Chinese medicine (CM) by the Delphi method.

Methods. A total of 200 CM-guided diagnostic items measuring signs and symptoms for infectious diseases were compiled from CM literature archives from the Han to Ming dynasties, CM textbooks in both China and Taiwan, and journal articles from the China Knowledge Resource Integrated Database. The items were based on infections and the six excesses (Liu Yin) etiological theory, i.e., Feng Xie (wind excess), Han Xie (coldness excess), Shu Xie (summer heat excess), Shi Xie (dampness excess), Zao Xie (dryness excess), and Huo Xie (fire excess). The items were further classified into the six excess syndromes and reviewed via a Delphi process to reach consensus among CM experts.

Results. In total, 178 items with a mean or median rating of 7 or above on a scale of 1–9 from a panel of 32 experts were retained. The numbers of diagnostic items in the categories of Feng (wind), Han (coldness), Shu (summer heat), Shi (dampness), Zao (dryness), and Huo (fire) syndromes were 15, 22, 25, 37, 17, and 62, respectively.

Discussion. It's the first scale based on the six excesses (Liu Yin) and constructed by the Delphi method; the CM experts epitomized the contents of CM literature and journal articles via the process. Future applications of the SEED scale in clinical practice, research and CM education are expected.

Conclusions. A CM-based six excesses (Liu Yin) evaluation and diagnosis (SEED) scale was developed for the evaluation and diagnosis of infectious diseases based only on signs and symptoms.

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The constitution and heart rate variability in lupus nephritis

Hen-Hong Chang^{1*}, Han-Kuei Wu², Yao-Fan Fang³, Yen-Fu Chen³

¹ School of Chinese Medicine, and Research Center for Chinese Medicine & Acupuncture, China Medical University, Taichung, Taiwan

² Institute of Traditional Medicine, School of Medicine, National Yang-Ming University, Taipei, Taiwan

³ Division of Rheumatology, Allergy and Immunology, Chang Gung Memorial Hospital, Taoyuan, Taiwan

Background. Systemic lupus erythematosus (SLE) is an auto-immune disease, which may cause multiple organ involvement, such as nephropathy. Previous study showed that SLE has typical pattern of yin vacuity, blood vacuity, qi vacuity, dampness, rheum and heat. The correlation between heart rate variability (HRV) and yin / yang is noted. Higher sympathetic activity is also noted in SLE patients reflecting yin vacuity and yang exuberance.

Objectives. Our study is to analyze the constitution and HRV in lupus nephritis (LN).

Methods. SLE patients visiting outpatient clinic in Chang Gung Memorial Hospital were invited into the study, among them those with LN were the study group, and those without were the control group. The diagnosis criteria is according to the international guideline. The Constitution in Chinese Medicine Questionnaire (CCMQ) and HRV were checked in the same visit. For HRV, low frequency (LF) and high frequency (HF) component were calculated from frequency analysis.

Results. Compared to SLE group, LN group had more patients with the constitution of phlegm dampness, qi stagnation and damp-heat, but the difference is not significant. In HRV, LN group presented higher heart rate ($p=0.002$) and lower LF ($p=0.042$). Higher HF ($p=0.287$) and lower LF in LN group may reflect lower sympathetic activity. For all participants in this study, the negative correlation between yang vacuity and LF% (the percentage of LF in total power, representing sympathetic activity) were also noted ($p=0.025$).

Discussion. Compared to the sympathetic hyperactivity reported in SLE patients, LN group had and lower sympathetic activity and lower HRV total power ($p=0.164$). This may imply the progression of dual vacuity of yin and yang in the constitution.

Conclusions. TCM constitution and HRV may be helpful in evaluating LN and providing suggestion for health care.

P-143**The relationship between tongue color and the subjective premenstrual body weight change.**

Yin-Jen Chang ¹, Li-Ling Shen ¹, Shan-Yu Su ^{1,2}

¹*Department of Chinese Medicine, China Medical University Hospital, Taichung 40447, Taiwan*

²*School of Post-Baccalaureate Chinese Medicine, College of Chinese Medicine, China Medical University, Taichung 40402, Taiwan*

Background. The symptoms of premenstrual syndrome (PMS) could be divided into physical symptoms and mental symptoms. Most of the symptoms are subjective, and therefore the development of objective evaluation methods for PMS is needed.

Objectives. This study investigated the relationship between tongue color and the occurrence of premenstrual syndrome.

Methods. Tongue surface photographs were taken in the luteal phase of fifteen volunteers with biphasic basal body temperature. Color values on the five areas of the tongue surface were examined according to the red (R)-green (G)-blue (B) models. Scores of premenstrual syndrome were examined by a self-reported questionnaire. The correlation between the premenstrual syndrome and the tongue color was evaluated using Pearson correlation analysis.

Results. There were no significant differences between tongue color and premenstrual mood change, abdominal distension, breast distension, body ache, lacking of concentration, poor sleeping, and appetite change. However, the subjective body weight gain was positively correlated with the color values of R ($r = 0.593$, $p = 0.020$), G ($r = 0.7$, $p = 0.004$), and B ($r = 0.583$, $p = 0.023$).

Discussion. The present study revealed an association between tongue color and premenstrual body weight change. The high tongue color values of R, G, and B in subjects with obvious body weight change might be caused by fluid retention before menstruation.

Conclusions. The method used in this study, i.e. the tongue color measurement, have the potential to be developed as a platform to evaluate the objective symptoms of premenstrual syndrome.

The investigation to standard abdominal patterns of Toki-Shakuyaku-San or Keishi-bukuryo-Gan in Kampo Medicine

Shuji Yakubo¹, Yukiko Ueda¹, Kazuhiro Muroga¹, Masayoshi Soma¹, Takao Namiki², Takashi Nakayama³, Kazufumi Yamanaka³, and Richard S. Lavin⁴

¹*Division of General Medicine, Department of Medicine, Nihon University School of Medicine, 30-1 Oyaguchi-Kamicho, Itabashi-ku, Tokyo 173-86110, Japan*

²*Department of Japanese-Oriental (Kampo) Medicine, Graduate School of Medicine, Chiba University, 1-8-1 Inohana, Chuo-ku, Chiba 260-8677, Japan*

³*Nomura Techno Co., Ltd., 2-2-1 Shinkiba, Koto-ku, 136-0082 Tokyo, Japan*

⁴*Prefectural University of Kumamoto, 3-1-100 Tsukide, Higashi-ku, Kumamoto, 862-8502, Japan*

Background. Abdominal diagnosis (“Fukushin”) is a core diagnostic method in Kampo medicine has been developed independently in Japan. Use of this method allows practitioners to obtain what is known as an abdominal pattern by reading the various physical signals in the abdominal area. Such abdominal patterns cannot easily be obtained by means of medical imagery or clinical tests. Therefore, in an attempt to educate abdominal diagnosis or achieve standardization of abdominal patterns, we have developed a Fukushin Simulator.

Objectives. Part of the project, we studied to create models of abdominal pattern expressing Toki-Shakuyaku-San or Keishi-bukuryo-Gan.

Methods. The basis of the simulator is the lower chest and abdomen of a healthy adult female. We placed cotton wool in the interiors of the models and coated it in soft urethane foam. To increase the resistance in lower abdomen, we used urethane foam mixed with silicon rubber. In Keishi-bukuryo-Gan model, we made a sound system that shout “ouch!” by appropriate abdominal diagnosis in appropriate 4 lesions in the lower abdomen.

Results. By such adjustments, we were able to reproduce abdominal patterns of Toki-Shakuyaku-San or Keishi-bukuryo-Gan.

Discussion. At present, international standardization of traditional medicine is becoming a major area of interest. One important part of standardizing Kampo medicine is the standardization of abdominal diagnosis and abdominal patterns, as well as standardization of abdominal diagnosis by the education. We believe that using the Fukushin Simulator is a promising approach to this standardization, and we have been working to improve the simulator.

Conclusions. It appears that the Fukushin Simulator Toki-Shakuyaku-San model or Keishi-bukuryo-Gan model have great promise not only in training practitioners in the clinical technique of abdominal diagnosis but also in the standardization of abdominal patterns.

P-145

A comparison of two Chinese medical constitution questionnaires: a pilot study

Lin, Yu-Chun^{1,3}, Chang, Yu-Hung³, Chang, Hen-Hong²,

¹*School of Chinese Medicine, College of Chinese Medicine, China Medical University, No.91, Hsueh-Shih Road, Taichung, Taiwan*

²*School of Chinese Medicine, and Research Center for Chinese Medicine & Acupuncture, China Medical University, Taichung, Taiwan*

³*Department of Public Health, College of Public Health, China Medical University, Taichung, Taiwan*

Background. Several questionnaires are currently used for clinical research in Traditional Chinese Medicine. Specifically, the Constitution in Chinese Medicine Questionnaire (CCMQ) and the Body Constitutions Questionnaire (BCQ) are validated instruments that have been developed during the last two decades. Three common body constitutions are defined in the CCMQ and BCQ: gentleness/plain, Ying-deficiency, and Yang-deficiency. Other body constitutions, namely Qi-deficiency, phlegm-dampness, dampness-heat, blood-stasis, Qi-depression, and special diathesis, are described in the CCMQ only, while stasis is only defined in the BCQ.

Objectives. To evaluate the consistency between the two questionnaires.

Methods. A total of 16 participants were interviewed; each completed both questionnaires based on their self-perceived symptoms. One questionnaire was completed, followed by the other three to seven days later. The CCMQ comprises 60 items categorized into 9 body constitutions, while the BCQ consists of 44 items grouped in 3 body constitutions. One- to five-point Likert Scales are used to represent the severity of each item. The presence of a body constitution was determined by scoring the corresponding items and cut-off points defined in previous validation studies. The consistency between the two questionnaires in terms of body constitution was examined using Kappa (κ) value.

Results. The results demonstrated (1) moderate consistency ($\kappa=0.48$; $p<0.05$) in gentleness/plain, and slight consistency in both Ying-deficiency ($\kappa=0.20$; $p<0.10$) and Yang-deficiency ($\kappa=0.18$; $p=0.19$); (2) moderate consistency ($\kappa=0.41$; $p<0.05$) between Yang-deficiency in the BCQ and Qi-deficiency in the CCMQ; and (3) that stasis in the BCQ is substantially consistent with dampness-heat ($\kappa=0.61$; $p<0.01$) and fairly consistent with blood stasis ($\kappa=0.31$; $p<0.05$) in the CCMQ.

Conclusions. There is moderate consistency between the two questionnaires in terms of gentleness/plain constitution, as well as between Yang-deficiency in the BCQ and Qi-deficiency in the CCMQ.

P-146

***Hangekobokuto* mainly improved chilliness and constipation of patients who had fulfilled the criteria of a questionnaire for the diagnosis of Qi stagnation**

Mitsuyuki Takamura¹, Hiromichi Yasui², Kazuo Maruyama^{1,3}

¹*Mie University Hospital Kampo medicine outpatient department, Edobashi 2-174 Tsu-city, Japan*

²*Yasui Clinic, Kitahama-cho Yokkaichi-city, Japan*

³*Department of Anesthesiology and Critical Care Medicine, Mie University School of Medicine, Edobashi 2-174 Tsu-city, Japan*

Background. The Kampo medicine diagnostic criteria do not have much measuring method which deserves quantitative variations. The questionnaire for the diagnosis of Qi stagnation which might evaluate this qualitative diagnosis had been reported (Okitsu et al. 2012). We had reported that we verified the validity of this questionnaire using *hangekobokuto* and it improved scores of the questionnaire more than other formulas. However, we had not elucidated which variables were contributed to its improvement.

Objectives. To know which variables (symptoms) of the questionnaire were improved by *hangekobokuto*.

Methods. A retrospective clinical study of 9 patients who had been newly diagnosed as Qi stagnation by the questionnaire with receiving *hangekobokuto* from January 2013 to December 2014. The questionnaire inquires with or without independent 23 symptoms. Re-examination of the questionnaire was made 4 to 6 weeks after administration of *hangekobokuto*. We calculated differences between improvement and deterioration in each symptom of all patients.

Results. Most improved symptoms were “chilliness” and “constipation”. “Systemic body pain” and “choke of the throat” were most deteriorated.

Discussion. It has been said that the most popular symptom for adapting *hangekobokuto* is “choke of throat”. But our result did not reflect that tradition. We probably should prescribe *hangekobokuto* to patients who complain of chilliness with Qi stagnation.

Conclusions. *Hangekobokuto* mainly improved chilliness and constipation of patients who had fulfilled the criteria of a questionnaire for the diagnosis of Qi stagnation.

P-147

Comparison of the sublingual vein in a seated and supine position

Akira Morita¹, Takao Namiki¹, Takeshi Oji¹, Michimi Nakamura¹, Hideki Okamoto¹, Akio Yagi¹, Hirobumi Shimada¹, Koichi Ryu¹, Fumina Kobayashi², Toshiya Nakaguchi³

¹Department of Japanese-Oriental (Kampo) Medicine, Graduate School of Medicine, Chiba University, 1-8-1 Inohana, Chuo-ku, Chiba 260-8670, Japan

²Graduate School of Engineering, Chiba University, 1-33 Yayoi-cho, Inage-ku, Chiba 263-8522, Japan

³Center for Frontier Medical Engineering, Chiba University, 1-33 Yayoi-cho, Inage-ku, Chiba 263-8522, Japan

Background. Observation of the sublingual vein is utilized for the diagnosis of blood stasis in Oriental Medicine. During medical examination, a sitting position is mainly used in China, but a supine position is often used in Japan due to abdominal diagnosis.

Objectives. To investigate potential differences in width of the sublingual vein between a seated and supine position.

Methods. We performed a study with 70 patients at Chiba University Hospital as follows: 1) documented pictures of the sublingual vein in a seated position and supine position with a digital camera;; 2) classified the pictures into 4 grades (none, few, medium, severe) using diagnoses from several specialists in Kampo medicine;; 3) measured points of the sublingual vein in the pictures as close as possible to the tongue root, and maximal points of a single blood vessel diameter of the vein;; 4) examined the relationship between the width of the sublingual vein and physical findings (age, sex, BMI, and blood pressure).

Results. Out of 93 possible subjects, this study enrolled 70 patients (19 males and 51 females, average age 59.2±15.4). Average BMI, systolic blood pressure, and diastolic blood pressure were 22.0±3.8kg/m², 133.3±19.3mmHg, and 76.3±11.3mmHg, respectively. The mean value of the width of the sublingual vein was 1.6±0.6mm and 2.0±0.5mm in the seated position and supine position, respectively. Sublingual veins of patients in the supine position were significantly thicker than those in the sitting position ($p < 0.0001$). We found no significant differences in the relationship between the width of sublingual vein and physical findings (age, sex, BMI, and blood pressure) in this study.

Discussion & Conclusion. Short lingual frenum and difficulty in turning tongue over may decrease the number of subjects, and degree of tongue protrusion in observation of sublingual vein depends on individual differences. Therefore, observation of the sublingual vein is limited as a diagnostic method. Increasing venous return can be regarded as a possible factor in increased width of sublingual vein in the supine position. Consequently, when observing the sublingual vein in the supine position, it is necessary to consider enlargement of blood vessel diameter.

P-148

Preliminary study of a diagnostic tool for cold sensation of hands

Yui Sasaki⁵, Seungwoo Ko¹, Kyung-hwan Kong¹, Hyun Kyung Sung²,
Seung-Ho Sun³, Ki-Yong Jung⁴, You-Kyung Choi⁴, Jong-Hyeong Park⁴,
Chan-Yong Jeon⁴, Seong-Gyu Ko⁵

¹*Dept. of Korean Internal Medicine, College of Korean Medicine, Se-Myung University. Korea*

²*Dept. of Oriental Pediatric, College of Korean Medicine, Se-Myung University. Korea* ³*Dept. of Korean Internal Medicine, College of Korean Medicine, Sang-ji University. Korea*

⁴*Dept. of Korean Internal Medicine, College of Korean Medicine, Ga-chon University*

⁵*Dept. of Preventive Medicine, College of Korean Medicine, Kyung-Hee University*

Background: In Korean medical clinics, many patients complain cold hypersensitivity in the hands and feet (CHHF). CHHF symptoms have been lower quality of life. However there is no standardization diagnosis tools and methods for CHHF.

Objectives: This study was aimed to find effective medical device for cold sensation of hands.

Methods: Patient with cold sensation (N=42) were recruited in July 2013. We surveyed patient's general characteristics, severity of cold sensation, body temperature in Nogung (PC8), Hyeopbaek (LU4) with digital thermometer, digital infrared thermal imaging and pulse wave velocity.

Results: The relation between severity of cold sensation and temperature in *Nogung* (PC8), *Hyeopbaek* (LU4) was statistically significant. Through this study, there is a higher correlation between the severity of cold sensation and *Nogung* (PC9) than *Hyeopbaek* (LU4) temperature measured by digital thermometer. No other statistical significance was noted among indexes of other results.

Discussion: Digital infrared thermal imaging did very sensitive and affected with environment. So, this machine is inadequate for diagnosis of cold hypersensitivity in hands and feet. Because of simplicity and economics, we recommended digital thermometer for diagnosis of cold hypersensitivity in hands and feet.

Conclusions: Measuring the temperature of a thermometer on *Nogung* (PC9) is most reasonable for severity of cold sensation of hands. To generalize, it should be need further large scale study for cold sensation of hands.

P-149**"Side effect" of medicinal cooking based on Kampo medicine**

Koichiro Tanaka, Koki Chiba, Kazuhiko Nara, Yoshinari Kono, Hidetoshi Itakura,

Takanori Matsuoka, Tsukasa Fueki, Kazuhiro Yoshida, Oto Miura

Department of traditional medicine, School of Medicine, Toho University, Japan

Background. There are some "tasting medicinal cooking" tours conducted in Japan. Most of them are based on commercial basis. It is not sometimes appropriate that all participants have same medicinal cooking not based on exact knowledge of Oriental Medicine.

Case report. 49 years old woman presented with skin rash itching of bilateral upper arms, abdomen and lower legs after a "tasting medicinal cooking" 4days' tour . Her skin rash was red, formed blisters. She went to a dermatology clinic and was diagnosed with urticaria and prescribed anti-histamines. But it was not effective for her symptom. The patient came to our department to look for alternative treatment. She ate medicinal cooking including ginseng, garlic, jujube every 4 days during the tour. On physical examination, several redness rashes around her navel, her tongue is light red, pulse is soft "緩".

Results. We prescribed "黄連解毒湯合白虎湯加減"Orengedoku-to and Byakko-to" which was commonly used to treat strong wet-heat pathogen "湿熱".

Two weeks' oral administration of this medication was very effective to treat her urticaria. **Discussion.** Her constitution is hot in dairy basis. However, she had medicinal cooking including ginseng, garlic, jujube several times during the 4 days. These three herbs are considered to encourage body "heat". Therefore, it is not appropriate for her to take this cooking.

Conclusions. Medicinal cooking tours should be conducted based on at least minimum knowledge of Kampo medicine, not just by commercial basis.

P-150**Effectiveness of acupressure on sleep quality in surgical intensive care unit**

Hsiao, Li-Yu

Registered Nurse, Kaohsiung Chang Gung Memorial Hospital, Kaohsiung City, Taiwan. Master

Background. Sleep is the requirement of human life to be with restored energy and maintain the body's normal function.

Objectives. The aim of the present study was to investigate the usefulness of acupressure on sleep quality in surgical intensive care unit.

Methods. The data were generalized estimating equation(GEE) for inferential statistics. The statistical method included chi-square, t-test, and Person Correlation. Statistical significance was set at $p < .01$. ANCOVA analysis for differences between and within these two groups.

Results. Heart rate variability showed that massage after in the experimental group parasympathetic activity was increased. The average of heart rate was decreased.

Subjective sleep quality which included sleep latency, sleeping duration, sleep efficiency, sleep disturbance, use of hypnotic, day-time functioning, and sleep quality and some items in objective sleep quality that included sleep latency, sleeping duration ($p=.008$), sleep efficiency ($p < .001$) and number of awakening ($p=0.012$) had significant improvement after intervention.

Discussion. The acupressure could improve the patients' sleeping time and quality.

Conclusions. Acupressure could improve the patients sleeping quality. It was find the Heart rate variability with could be used as a predictor of sleep quality on the result of GEE. Also, it could stimulate the parasympathetic of sedative effect at the same time. These findings can serve as a reference to nursing staff in planning a acupressure intervention under similar patientcondition.

P-151

The effects of acupressure to improve gastrointestinal motility in post-surgical patients

Kuo, Chih-Ying¹, Chen, Ching-Hsiu² (Corresponding author)

¹Nurse, Kaohsiung Chang Gung Memorial Hospital, Kaohsiung City, Taiwan.

Master Student, Department of Nursing, Fooyin University, Kaohsiung, Taiwan.

²Assistant Professor, Department of Nursing, Fooyin University, Kaohsiung, Taiwan. Email: martindc@ms28.hinet.net

Background. Gastroparesis is common problem in post-surgical patients and decrease bowel sound frequency and may increase the incidence of malnutrition for patients in the first three days after surgery.

Objective. The purpose of this study was to evaluate the effects of acupressure to improve gastrointestinal motility in post-surgical patients.

Methods. This pilot study used a quasi-experimental, one-group pretest-posttest design. The participants were post-surgical of gastrointestinal patients in Kaohsiung hospital, in Taiwan. All participants received acupressure for 3 minutes at each of two meridian points: Zusanli (ST-36) and Shangjuxu (ST-37). Acupressure was performed twice a day. Evaluate the improvement outcomes by the auscultation bowel sounds change. Data analyzed using SPSS 22.0 statistical software windows version and and pair-t test.

Results. The study (n=20) average age was 42.6±17.17 years. The male were 50% (n=10), and female were 50% (n=10). The education including college school 20%, high school 45%, junior school 5%, and illiterate 30%. After the interventions, there were statistically significant in the gastrointestinal motility ($P<0.0001$).

Discussion. ST-36 and ST37 acupressure was able to improvements of the gastrointestinal motility in this study.

Conclusion. The result from this study support that non-invasive acupressure of these meridian points can significantly improve gastrointestinal motility and application of this technique may improve a patient's comfort after surgery.

P-152

The effects of fetal respiration technique combined with aromatherapy for anxiety of spinal surgical patients: Preliminary study

Shih, Kuei-Feng¹, Chen, Ching-Hsiu² (Corresponding author), Chao, Chia-Ling³

¹RN, Nurse Practitioner, Kaohsiung Municipal Ta-Tung Hospital, Kaohsiung City, Taiwan, Master Student, Department of Nursing, Fooyin University, Kaohsiung, Taiwan.

²Assistant Professor, Department of Nursing, Fooyin University, Kaohsiung, Taiwan.

³RN, Nurse Practitioner, Kaohsiung Municipal Ta-Tung Hospital, Kaohsiung City, Taiwan

Background. Many previous researchers have demonstrated that spine surgical patients with the higher anxiety before the operative.

Objectives. The aim of this study was to evaluate the effects of fetal respiration technique Combined with aromatherapy for anxiety of spinal surgical patients.

Methods. This preliminary study used a quasi-experimental, one-group pretest-posttest design. The participants were pre-operation of spinal surgical patients in Kaohsiung hospital, in Taiwan. All participants received the interventions at pre-operation, twice time a day, at least 10 minutes each time. The interventions were included the deep of low-abdominal respiration and essential oil. The fetal respiration technique was inspiratory by nasal, intention the fresh air to full bilateral pulmonary, then slowly push to the low-abdominal, stay 3~5 second, and expiratory to mouth. Evaluate the improvement outcomes by the visually anxiety Analogue Scale (VAS-A), heart rate, respiration rate and blood pressure. Data analyzed using SPSS 22.0 statistical software windows version and pair-t test. **Results.** The results showed that subject's (n=30) average age was 60.97±14.20 years. The male were 36.7% (n=11), and female were 63.3% (n=19). After the interventions, there were statistically significant in the VAS-A (t=14.56, P<0.001), heart rate (t=10.93, P<0.001), respiration rate (t=6.39, P<0.001), systolic blood pressure (t=7.17, P<0.001), and diastolic pressure (t=4.13, P<0.001).

Discussion. There were immediately improvements of the anxiety, heart rate, respiration rate and blood pressure in this study.

Conclusions. The result from this study support fetal respiration technique combined with aromatherapy as an alternative approach to relieving anxiety of spinal surgical patients. Further research is need to determine the long-term effects to alleviate anxiety of spinal surgical patients.

P-153

Prescribing patterns of concentrated extract product : Ge Gen Tang (葛根湯) for Common Cold in Taiwan: A Population-Based Study

Pei-Ying Chou^{1,2}, Chen-Jei, Tai^{1,2}, Wei-Ming Ke³, Shu-Chen Chien³, Ching-Chiung Wang^{1,3}

¹*Graduate Institute of Pharmacognosy, Taipei Medical University, Taipei, Taiwan*

²*Department of Traditional Chinese Medicine, Taipei Medical University Hospital, Taipei, Taiwan*

³*School of Pharmacy, College of Pharmacy, Taipei Medical University, Taipei, Taiwan*

Background. Ge gen tang (GGT) was widely prescribed in common cold and back pain. Moreover, GGT usually was prescribed with other formulas or single herbs by Chinese medicine doctors. However, the prescribing pattern of GGT is not classified yet.

Objectives. The purpose of this research is to discuss the major principle clinical use of GGT base on a population-based study. And to analyze the difference of prescribing pattern for common cold (ICD-9-460) in different seasons and patient's age. And the clinical application of GGT will also be explored.

Methods. Firstly, what is GGT used in the most common diseases which were analyzed. Secondly, different dosage groups of GGT (<3g, 3-5g, 5-9g, >9g) were investigated the relation of compatibility of formulas and single herbs. Finally, diversity of prescribing pattern was assessed by season used and patient's age.

Results. According to the National Health Insurance data 2007-2011. GGT was mostly prescribed in common cold (ICD-9-460), approximately 19.1%. In addition the most prescribed dosage was between 5 to 9 gram per day. A total of 64206 prescriptions were cited. And the prescription derived 6 types according to frequency : 1. GGT only 2.04%, 2. GGT with Chuan-Xiong-Cha-Tiao-San (CXCTS, 川芎茶調散) 1.24%, 3. GGT with Xin Yi Qing Fei Tang (XYQFT, 辛夷清肺湯) and Ma-Xsing-Gan-Shih-Tang (MXGST, 麻杏甘石湯) 0.62%, 4. GGT with Yin Qiao San (YQS, 銀翹散) 0.62%, 5. GGT with Chiu-Wei-Chiang-Huo-Tang (CWCHT, 九味羌活湯) 0.56% , 6. GGT with Xsin-YI-San (XYS, 辛夷散) 0.53%. In spring, GGT with XYQFT and MXGST (type 3), GGT with YQS (type 4) were more commonly use. In summer, GGT with XYQFT and MXGST (type 3) was more commonly use. In fall, GGT (type 1) was more commonly use. In winter, GGT (type 1), and GGT with CXCTS (type 2) was more commonly used. Moreover GGT and its prescribing pattern were more often used in 31~60 years old .

Conclusions. Base on a population-based study, GGT (type 1) and GGT with CXCTS (type 2) were the most commonly prescribing pattern for common cold and mostly used from December to January . However, GGT were rarely used for common cold in the elderly and children.

P-154

Prescription patterns of concentrated extract Product: Ban-Xia-Xie-Xin-Tang (半夏瀉心湯) for disorders of function of stomach in Taiwan: A Population-Based Study

Pin-Chen Huang^{1,2}, Tsung-Hsiu Wu², Wen-Li Liang^{1,3}, Ching-Chiung Wang^{1,3},

¹Graduate Institute of Pharmacognosy, Taipei Medical University, Taipei, Taiwan

²Department of pharmacy, Taipei City Hospital, Taipei, Taiwan

³School of Pharmacy, College of pharmacy, Taipei Medical University, Taipei, Taiwan

Background. Ban-Xia-Xie-Xin-Tang(BXXXXT) was recorded in *Shang Han Lun* (傷寒論). From the viewpoint of traditional Chinese Medicine, BXXXXT is used to treat syndrome of abdominal fullness due to intermingling of cold and heat. This formula is widely prescribed in digestive diseases in Taiwan.

Objectives. We used the National Health Insurance data of Taiwan (2007-2011) to explore commonly used indications of BXXXXT and its prescription patterns in the treatment of disorders of function of stomach (ICD-9-536).

Methods. Firstly, what is BXXXXT used in the most common diseases which were analyzed. Secondly, different dosage groups of BXXXXT (<3g, 3-5g, >5g) was set to search frequently used indications. Finally, the ICD-9 code 536 was used to access prescription patterns of BXXXXT and other co-morbidities.

Results. Analyzed a total of 190,583 BXXXXT prescriptions, disorders of function of stomach (ICD-9-536) was the most commonly used indication in three dosage groups (<3g :16.42%, 3-5g:18.96%, >5g: 25.68%). Based on 47400 prescriptions of BXXXXT in ICD-9-536, we derived 7 type according to frequency: 1. BXXXXT with Ping-Wei-San (平胃散) (0.84%), 2. BXXXXT only(0.76%), 3. BXXXXT with Xiang-Sha-Liu-Jun-Zi-Tang (香砂六君子湯)(0.55%), 4. BXXXXT with Bal-He-Wan (BHW 保和丸), *Corydalis yanhusuo* W. T. Wang, and *Poria cocos* (Schw.) Wolf(0.47%), 5. BXXXXT with An-Zhong-San (安中散) (0.46%), 6. BXXXXT with BHW(0.36%), 7. BXXXXT with Ching-Wei-San (清胃散), *Sepiella maindroni* de Rochebrune (or *Sepia esculenta* Hoyle), *Fritillaria thunbergii* Miq., *Areca catechu* L. and *Massa Medicata Fermentata* (神麴). In addition, another ICD-9 code 536 was also the most commonly diagnosed co-morbidity.

Conclusions. Based on a population-based study, BXXXXT was commonly used for disorders of function of stomach, and usually combined with other abductive dispersing, pain relieving, and acid suppressing CEPs.

P-155 Utilization of and attitudes towards traditional Chinese medicine: A survey of customers and merchants

Sung Hui Tseng^{1,2}, Shui Lien Chen³, Wen-Chi Hou⁴, Ching Chiung Wang⁵

¹*Department of Physical Medicine and Rehabilitation, Taipei Medical University Hospital, Taipei, Taiwan*

²*School of Medicine, College of Medicine, Taipei Medical University, Taipei, Taiwan*

³*Department of Management Sciences, Tamkang University, New Taipei, Taiwan*

⁴*Graduate Institute of Pharmacognosy, Taipei Medical University, Taipei, Taiwan*

⁵*School of Pharmacy, College of Pharmacy, Taipei Medical University, Taipei, Taiwan*

Background. In 1960's, there were many traditional Chinese medicine (TCM) stores. Although TCM and associated products are rapidly developing since late 1990s worldwide, the number of such stores actually reduced. Sustaining prosperous TCM stores is an important issue for global TCM marketing.

Objectives. The aims were to understand the variation in utilization of and attitude toward TCM and TCM drink products between general population and merchants. The result may provide reference for future TCM industry and marketing development.

Methods. This study was a descriptive, cross-sectional survey using the convenience sampling method. A total of 208 adults and 153 TCM merchants were recruited for this study. Interview-administered questionnaires were used. Descriptive statistics were used to analyze the data. **Results.**

Most merchants agreed that customers of TCM stores were usually older, bought TCMs' materials or specific materials based on their need, and complained most about the price. TCM stores in northern Taiwan usually had more regular customers than stores in the southern part. More customers in the North utilized TCM or related products for personal illness intervention, while more used TCM as winter dietary supplement in the Middle and South. Most people as customers would buy TCMs' materials as winter dietary supplements from TCM stores seasonally. Lacking the knowledge about TCM reduced their use of TCM. Most people would buy TCM drinks from TCM stores as tonic. In most people as customers, lacking the knowledge about TCM would reduce their purchase intention.

Discussion. The attitudes toward TCM were mostly positive among the general population. However, the public still need more knowledge to increase their utilization of TCM.

Conclusions. Both customers and merchants have similar attitude toward utilization of TCM as winter dietary supplement, and that TCM stores are places to buy TCM raw materials.

P-156**Examination of frequency of side effects from over-the-counter Kampo formulations and ethical Kampo formulations in Japan**

Takashi Ito, Yoko Kimura

Institute of Oriental Medicine, Tokyo Women's Medical University. 1-21-8, Tabata, Kita-ku, Tokyo 114-0014, Japan.

Background. Kampo formulations are used in medical institutions under the medical insurance system in Japan and some can also be bought over-the-counter in pharmacies at the patient's own expense. The Japanese Ministry of Health, Labour and Welfare (MHLW) publishes details of side effects of ethical Kampo formulations (EK) and over-the-counter Kampo formulations (OK) three times per year on its website, based on information provided by pharmaceutical companies.

Methods. We examined the incidences of side effects of EK and OK reported on MHLW's website in one year, from April 2014 to March 2015.

Results. Among 291 reports of side effects caused by all over-the-counter drugs in the one-year period, 45 (15.5%) involved OK. Among approximately 76,500 reports of side effects caused by all prescribed drugs, 278 (0.36%) involved EK. The 45 reported side effects of OK, included 14 liver dysfunction, 4 pneumonia/dyspnea, and 3 interstitial lung disease. The putative causative agents were *Scutelliae Radix* (16 cases), *Glycyrrhizae Radix* (one case) and *Gardeniae Fructus* (one case). The 278 reported side effects of EK included 63 liver dysfunction, 58 interstitial lung disease, 26 mesenteric vein sclerosis, 45 pneumonia/pulmonary diseases, 32 pseudoaldosteronism, 11 skin eruption, 5 arrhythmia, 4 rhabdomyolysis and 4 anaphylaxis. The putative causative agents were *Scutelliae Radix* (128 cases), *Glycyrrhizae Radix* (32 cases) and *Gardeniae Fructus* (25 cases).

Discussion/Conclusions. Although side effects caused by over-the-counter drugs may be less likely to be reported to pharmaceutical companies, OK accounted for 15.5% of side effects in this group, while EK accounted for only 0.36% of side effects of all ethical drugs. These figures are not directly comparable, but they suggest that there may be a higher frequency of side effects of OK compared to EK. The production value of OK is 18.2 billion yen vs. 700 billion yen for all over-the-counter drugs (2.6%), while that of EK is 130 billion yen vs. about 6 trillion yen for all ethical drugs (1.9%). In view of the popularity of OK in Japan and the trend for more potent formulations (equivalent to EK), we suggest that more should be done to ensure safe use of OK.

References. MHLW's website (<http://www.mhlw.go.jp/stf/shingi/shingi-yakuji.html?tid=127867>)

P-157

Prescription pattern and effect on kidney of concurrent usage of metformin and astragalus radix on patients with type 2 diabetes in Taiwan

Chien-tung Wu^{1,2}, Jung-nien Lai^{1,2}, Wan-ju Lee¹,

¹*Institute of Traditional Medicine, School of Medicine, National Yang-ming University, Taipei, Taiwan*

²*Department of Chinese Medicine, Taipei City Hospital, Taipei, Taiwan*

Background

Metformin is a first-line and most common drug for treatment of type 2 diabetes. And traditional Chinese medicine including Astragalus Radix is also widely used for type 2 diabetes. Metformin and Astragalus Radix seem to have synergetic effect¹. However, there has no evidence on human.

Objectives

The aim of the study is to describe the prescription pattern and to estimate the effect of concurrent usage of metformin and Astragalus Radix.

Methods

The study was composed with 1 million random sampled from National Health Insurance Research Database in Taiwan. We extracted 70,211 patients with type 2 diabetes, analyzed the usage of traditional Chinese medicine and estimated the risk of renal failure with concurrent usage of metformin and Astragalus Radix with Cox proportional regression model.

Results

There were 46,353(66.0%) patients with type 2 diabetes used traditional Chinese medicine, while 23,858(34.0%) had not. The risk of renal failure was decreased with the usage of traditional Chinese medicine (HR:0.48, 95%CI:0.41-0.56). And the risk also decreased while used metformin and Astragalus Radix, the risk reduce with concurrent usage (HR:0.28, 95%CI:0.23-0.35). The effect of concurrent usage still exist compared to patients used metformin only (HR:0.65, 95%CI:0.53-0.78).

Discussion

The reduced risk of renal failure may due to the hypoglycemic effect² or repair effect on kidney³ of Astragalus Radix. It is safe for concurrent usage of metformin and Astragalus Radix and could be the reason why traditional Chinese physicians prescribe Astragalus Radix commonly to treat patients with type 2 diabetes.

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P-158**A nationwide study for herbal drug safety in Korea**

Chang-Gue Son¹, Jung-Hyo Cho¹, Sang-Hoon Hong¹, Heung Ko¹, Dal-Suk Oh²

¹*Hepatology Department of Oriental Hospitals of Universities in South Korea*

²*Korean Institute of Oriental Medicine, Daejeon, South Korea*

Purpose: Herbal medicines have been used traditionally for thousands years and they have now been adopted worldwide. As the use of herbal medicine has grown, the issue for their safety has arisen. We aimed to evaluate the risk for adverse reaction focusing on herbal drug-induced liver injury (DILI) in South Korea.

Methods: This study is a multicenter-based prospective observation of serum biomarkers for both hepatic (bilirubin, AST, ALT, GGT, and ALP *et al.*) and renal function (BUN, creatinine). Inclusion criteria are 1) who are hospitalized patients with expectation of taking herbal drugs for over 14 days, and 2) no serum abnormality on initial day, and then any patient who use conventional drugs (antibiotics, steroids, anti-inflammatory agent *et al.*) is excluded. The changes of serum biomarkers were chased in every 7 days until discharge.

Results: Ten hospitals of Oriental Medicine College have participated. 1,117 patients (male 426 and female 691) were enrolled and 980 subjects (male 387 and female 613) have done the complete procedure by October 2015. Four women subject had shown the cases of DILI by RUCAM score. They had taken an herbal decoction, and reported a slight elevation of ALT or AST (2-fold of the upper limit of normal range) during the hospitalization. All of them were recovered from their abnormal values of hepatic enzymes within two weeks.

Conclusion: This is the first prospective clinical study for evaluation of incidence of herbal DILI, which shows the estimation of herbal DILI, approximately 0.4%.

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Retrospective study about the effectiveness of Korean medicine treatment on 254 patients visited obesity clinic

Yong-Ho Lee,¹ Nam-Gyeong Go², Ji-Hyun Lee¹

¹Onbody Korean Medicine Clinic, Myeongdong 1-4 2nd floor, Namsan-dong 1-ga, Jung-gu, Seoul, South Korea.

²Onbody Korean Medicine Clinic, Gangnam Dongyang building 5th floor 200-6, Nonhyeon-dong, Gangnam-gu, Seoul, South Korea

Background As obesity caused by poor eating habits and lack of exercise is highly prevalent in the world, we need treatments with no side effect. Consequently, there has been increasing interest in treatment with herbal medicines over recent years. However, there have been no previous large studies on the effect of Korean medicine for obesity including more than 200 populations.

Objectives This study aimed to report the effectiveness of Korean medicine treatment on 254 patients who have visited obesity clinic.

Methods Clinical records of 254 patients visiting obesity clinic from May 2013 to November 2014 were reviewed. Data collected and analyzed included age, sex, the change in BMI, skeletal muscle mass, weight, fat mass and body fat percentage through bioelectrical impedance analysis(BIA). The patients had been treated with Korean medicine in liquid and the medicine was taken before a meal for one month. Exercise or any special diet was not required.

Results Among the subjects analyzed, male and female percent was 3.5% and 96.5%. All patients were constituted with 50.0% of 20-29 age group, 34.1% of 30-39 age group and 15.9% of aged 40 and over group. In BMI, under 21kg/m², 21.0-22.9kg/m², 23.0-29.9kg/m², above 30kg/m² were 20.5%, 30.3%, 42.1%, 7.1% respectively. In terms of body fat percentage, patients were divided in four body fat percentage classes(<25%, 25.0~29.9%, 30.0~34.9%, >35%). Percent body fat in patients was 11.4%, 23.2%, 30.7% and 34.6% respectively. 96.1% of patients were showed weight loss compared with baseline, the decrease of body weight was 2.96±1.86kg, that of BMI was 1.13±0.70kg/m², that of fat mass was 2.40±1.62kg, and that of body fat percentage was 2.43±2.06% after 1 month of treatment.

Discussion As study population was comprised more women than men and most of them are in their 20s, it is believed that the motivation of weight loss is beauty rather than healthy. There was no significant relevance between the effect and age. There have been clear decreases in weight, fat mass with higher BMI and body fat percentage. And the weight loss is mostly from bodyfat.

Conclusions Demand for medical treatment for obesity being increasing, Korean medical treatment for obesity has the remarkably high cure rate.

References Lee YH, Go NG, Min DL. Retrospective study about the effectiveness of Korean medical treatment on 254 patients visited obesity clinic. J Korean Med Obes Res 2015;15(1):33-37.

P-160**Adjunctive traditional Chinese medicine use reduces medical expenditure in patients with fractures in Taiwan: A nationwide population-based study**

Hou-Hsun Liao^{1,2}, Chia-Chou Yeh², Che-Chen Lin¹, Bor-Chyuan Chen², Ming-Hsien Yeh^{1,2}, Mao-Feng Sun¹, Hung-Rong Yen¹

¹*School of Chinese Medicine, China Medical University, Taichung, Taiwan*

²*Department of Chinese Medicine, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Chiayi, Taiwan*

Background. Traditional Chinese medicine (TCM) has been used in the treatment of fracture for thousands of years. However, large-scale surveys examining the utilization of Chinese herbal products (CHPs) for treating fractures and their related symptoms are lacking.

Objectives. To investigate the prescription patterns and benefit of CHPs among patients with fractures in Taiwan.

Methods. We analyzed a sample of one million individuals randomly selected from the National Health Insurance Research Database who were newly diagnosed with fractures in 2001-2008, with a followed-up period through 2010.

Results. We identified 115,327 patients who were newly diagnosed with fractures in the study population. Among them, 4.97% (n=5731) adjunctively utilized TCM for fracture treatment. TCM users were mostly young or middle-aged, female, and resided in highly urbanized areas. Shu-ling-huo-xue-tang was the most frequently prescribed Chinese herbal formula, while Rhizoma Drynariae (Gu-sui-bu) was the most common single herb for patients with fractures. The CHPs were found to cover not only bone healing but also fracture-related symptoms. TCM users had lower medical expenditure for hospitalization for the first six months after incident fractures than non-TCM users (1749±2650 versus 2274±3159 US dollars, p<0.0001).

Discussion. Our study investigated the TCM utilization for patients with fractures in Taiwan. We identified the ten most common prescribed Chinese herbal formulas and single herbs for the treatment of fractures and fracture-related symptoms. Thus far, this is the largest population-based study examining the treatment of fractures by traditional medicine.

Conclusions. Integration of TCM treatment reduced the medical costs for hospitalization. Further basic research and clinical studies to investigate the mechanism and clinical efficacies of CHPs are warranted.

Medical expenditure of hospitalization and outpatient care between TCM and non-TCM users for the first six months after incident fractures.

Cost	TCM users		Non-TCM users		P-value
	N	mean (SD)	N	mean (SD)	
Hospitalization, USD	2280	1749 (2650)	43,612	2274 (3159)	< 0.0001
Outpatient care, USD	5641	498 (1832)	109,142	500 (908)	0.95

TCM: traditional Chinese medicine; USD: US dollars.

Prescribing patterns of concentrated extract product : Wu Lin San (五淋散) for cystitis in Taiwan: A population-based study

Steven Kuan-Hua Huan¹, Wei-Ming Ke², Chien-Chih Wu³, Ching-Chiung Wang²

¹*Division of Urological Oncology, Department of Surgery, Chi Mei Medical Center, 901 Chung Hwa Road, Yung Kang Dist., Tainan City 710, Taiwan*

²*School of Pharmacy, College of Pharmacy, Taipei Medical University, Taipei, Taiwan, 250 Wu-Hsing Street, Taipei City 110, Taiwan*

³*Department of Urology, Taipei Medical University Hospital, 252 Wu-Hsing Street, Taipei City 110, Taiwan*

Background. W Lin San (WLS) was recorded in the *Tai Ping Huei Min Ho Chi Chu Fang* (太平惠民劑局方) during the Sung (宋) dynasty. This formula is used for treating internal heat in bladder, dysuria, acute pain in umbilicus and abdomen, fatigue, urinary gravel, dark colored urine, and hematuria. Therefore, concentrated extract WLS's indications are Urethritis, cystitis, vesical calculi, renal calculi, and gonorrhea.

Objectives. We used the National Health Insurance data of Taiwan (2007-2011) to analyze the clinical application and the principle clinical use of WLS.

Methods. Firstly, what is WLS used in the most common diseases which were analyzed. Secondly, different dosage groups of GGT (<3g, 3-5g,>5g) were investigated the relation of compatibility of formulas and single herbs. Finally, diversity of prescribing pattern was assessed for cystitis (ICD-9-595) and patient's age.

Results. WLS was most prescribed in cystitis (ICD-9-595), approximately 21.60% that a total of 20362 prescriptions were cited and the most prescribed dosage was 3-5 g per day. Based on 4398 prescriptions of WLS in cystitis, there are 86.61% prescriptions used in more 50 years old and 71.24% patients are women. And the prescription derived 5 type according to frequency : 1.WLS added with Pa Cheng San (PCS 八正散) and Ti Tang Tang (TTT 抵當湯) 35.11%, 2.WLS with PCS and Tao Ho Cheng Chi Tang (THCCT 桃核承氣湯) 8.46%, 3. WLS with PCS and Dandelion (蒲公英) 7.20%, 4. WLS with PCS 4.15%, 5. WLS only 2.1%. According to the results, it can prove WLS's major indication is cystitis and usually combined with PCS more 55.0% using. However, prescriptions frequency rates of cystitis are 9.30%PCS, 6.39% WLS, 3.75% Lung Tan Hsieh Kan Tang (龍膽瀉肝湯), 3.70% Chu Ling Tang (豬苓湯) and 2.97% TTT, based on 68792 prescriptions.

Conclusions. Base on a population-based study, WLS with PCS and TTT (type 1) were the most commonly prescribing pattern CEPs for cystitis. Moreover, more 50 years old women more frequency visit Chinese Medicine clinic for cystitis than the other patients.

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Ear-acupressure for primary dysmenorrhea: A Systematic review

Wu, Ching-Yi ¹, Chen, Ching-Hsiu ^{2*}, Lin, Yu-Chi ^{3,4} (3,4nd author)

¹ Master Student, Department of Nursing, Fooyin University, Kaohsiung, Taiwan.

² Assistant Professor, Department of Nursing, Fooyin University, Kaohsiung, Taiwan.

³ Practice teacher and teaching assistants, Department of Nursing, Yuh-ing Junior College of Health Care & Management.

⁴ Graduate, Department of Nursing, Fooyin University, Kaohsiung, Taiwan.

E-mail: julie.martin@msa.hinet.net

Background. Primary dysmenorrhea is a common menstrual complaint with a major impact on women's quality of life, work productivity, and health-care utilization.

Objectives. Our aim was to conduct a systematic review of studies evaluating ear-acupressure for primary dysmenorrhea.

Methods. Electronic databases including PubMed CINAHL, Cochrane Library, EMCAM, Taiwan and Chinese databases were searched through Jun 2004 to Dec 2014. Randomized trials comparing ear-acupressure to sham, placebo, or standard-of-care control were included that measured outcomes of pain and were published in English and Chinese. Two (2) reviewers independently assessed trial eligibility, quality, and abstracted data to a standardized form. Standardized mean differences (SMD) were calculated for studies using a pain score or analgesic requirement as a primary outcome.

Results. Ten (10) studies met inclusion criteria. To exclusion tree studies has no pre/post data, Ear-acupressure was superior to controls for studies evaluating pain intensity (SMD, -0.794 [95% confidence interval (CI): -0.98, -0.61]; 7 studies). Removal of poor quality studies did not alter the conclusions.

Discussion. The available data from results showed ear-acupressure may be effective for alleviates menstrual pain.

Conclusions. However, these results were limited by the small number of trials. A more accurate estimate of the effect will require further large, well-designed RCTs with rigorous methods of randomized, and adequately concealed allocation.

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Quality assessment for Acupuncture prevalence study at hospitals and Clinics in Japan, a systematic review

Takashi Seki¹, Hiroshi B. Koide², Kenji Kawakita³, Kiichiro Tsutani²

¹*Tohoku University CYRIC, 6-3 Aoba, Aramaki, Aoba-ku, Sendai 980-8578, Japan*

²*University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo 113-0033, Japan*

³*Meiji University of Integrative Medicine, Hiyosicyo, Nantan, Kyoto 629-0392, Japan*

Background. More than additional 20,000 medical doctors are needed in Japanese hospitals. From ancient time, acupuncture has been used in Japan for health care. More than 100,000 acupuncturists are working in Japan. However, there is no systematic review on the prevalence of acupuncture at Japanese hospitals and clinics.

Objectives. To clarify the quality of research on the use of acupuncture at present Japanese hospitals.

Methods. Systematic review of articles on acupuncture prevalence at hospitals and clinics in Japan. Literature searches were conducted in the Japana Centra Revuo Medicina (Igaku Chuo Zasshi Kanko-kai) in Japanese. The strategy below was used to search: #1 acupuncture; #2 medical facility (health facility or hospital or doctor's office or medical institution or clinic); #3 research in the situation of use (research or use); #4 (#1 and #2 and #3). Three independent reviewers (H.B. Koide, K. Kawakita and T. Seki) extracted the data with the data extraction tool by CAMbrella management group in EU.

Results. After primary search of the database, 1,346 articles were screened out from electronic search, and the majority was excluded due to obvious ineligibility which including irrelevant titles and abstracts. After reading the titles and abstracts, majority of them was excluded. Then 10 full articles were retrieved for more detailed evaluation. In the end, 6 articles were reviewed. 13 variables in 5 domains were selected and evaluated. Average final percentage grade (0 - 13) was 8.3 +/- 2.2. There was no article mentioned the ethical approval. Effort taken to address potential sources of bias, number of beds and number of patients per week were described only in two articles, respectively.

Discussion. Though 4 of 6 articles were published in after 2010, none of them mentioned the ethical approval. Even for this kind of research, authors should submit their research plan to the ethical committee and mention on it in the article.

Conclusions. This review shows the quality of the articles on the use of acupuncture at Japanese hospitals. Most of them reached the allowable level except the ethical aspect.

P-164**The effects of acupressure for pulmonary diseases : A systematic review**

Hisang-Yun Huang^{1,2}, Chen, Ching-Hsiu^{3,*}

¹*RN, Head Nurse, Intensive Care Unit, Chi-Mei Medical Center*

²*Master Student, Department of Nursing, Fooyin University, Kaohsiung, Taiwan*

³*Ph.D, RN, Assistant Professor, School of Nursing, Fooyin University*

Background : Acupressure was one of the main forms of treatment in traditional Chinese medicine, and used to treat a wide variety of illnesses and health conditions.

Objectives : The aim of this study was to conduct a systematic review of evaluating acupressure for pulmonary disease.

Methods : Electronic databases including PubMed/MEDLINE, Cochrane Library, Elsevier Subject Collection, and Taiwan Chinese databases (CEPS) were searched through Jun 1995 to Jun 2015. The keywords including acupressure or acupuncture, pneumonia, aspiration pneumonia, and chronic obstructive pulmonary disease. Randomized controlled trials comparing acupressure and standard-of-care control were included that measured outcomes of oxygen concentration, and lung function and were published in English and Chinese. Two reviewers independently assessed trial eligibility, quality, and abstracted data to a standardized form. Articles quality was assessed using a Jadad-Quality Score, with scores ranging from 0 to 5.

Results : Twenty-three studies met inclusion criteria and the mean Jadad-Quality Score was 2.1. One study was showed significant improve the blood oxygen concentration, lung function, and recurrent rate for COPD patients. Two study were showed significant improve the pulmonary and intestine symptoms for asthma and pneumonia patients. Seventeen studies were showed the improving effeteness of lung function (FVC1, FVC, PEER), blood oxygen, and 6-minute walking distance, dyspnea, physiological indexes (respiration rate, heart rate), fatigue and anxiety. Three studies were showed significant improved the dyspnea, and exercise capacity.

Discussion : The available data from results showed acupressure could be improving physical and psychological discomfort for pulmonary disease.

Conclusions : Acupressure is an alternative to the attenuation of pulmonary disease's discomfort. Furthermore the consistency of physiological and psychological effectiveness should be done before widespread clinical application.

Research trend analysis on the cold hands and feet syndrome in the field of traditional medicine

Youme Ko¹, Kyeong Han Kim¹, Sunju Park², Ho-Yeon Go³, Jong-Ju Park³,
Seong-Gyu Ko^{1,*}

¹*Institute of Safety, Efficacy and Effectiveness Evaluation for Korean Medicine, Dept. of Preventive Medicine, College of Korean Medicine, Kyung Hee University, Republic of Korea*

²*Dept. of Preventive Medicine, College of Korean Medicine, Daejeon University, Republic of Korea*

³*Dept. of Korean Internal Medicine, College of Korean Medicine, Se-Myung University, Republic of Korea*

Background: In recent years, there are many patients who visit the oriental clinics with complaint of cold hypersensitivity in the hands and feet. However, there are few clinical researches on 'cold hands and feet syndrome'(CHFS) in traditional medicine(TM) field. Therefore, analyzing the preceding researches on the CHFS is essential for designing future clinical studies.

Objectives: This study aims to analyze the previous research trends on CHFS.

Methods: We searched the PubMed, Oasis, NDSL, RISS, CNKI, and J-Stage for published papers. We included epidemiological and efficacy studies of CHFS and excluded animal studies and review papers. The date of the search was 7 November 2015. We qualitatively analyzed studies according to several categories such as study design, diagnostic method, treatment, and outcome measurement.

Results: We searched 111 studies, and finally included 12 published papers in this study. Out of 12 papers, 58.3% were observational studies, 33.3% were case reports and 8.3% were randomized controlled trials. All the studies recruited patients based on self-report of the subjective symptoms of coldness in hands and feet since there is no standardized and structured diagnostic method for CHFS. There were variations in treatment patterns including single use of TM decoction or acupuncture or combination of treatments. Researchers applied various evaluation approaches on TM treatment, such as heart rate variability, digital infrared thermal imaging, etc.

Discussion: Even though CHFS is frequently seen in clinics, their clinical researches were rarely done by TM clinicians. Also, there were few already being published studies, but their quality of evidence was poor. It is not currently classified as a disease yet, and there is no standardized terminology for it. Thus, it was difficult to select appropriate keywords for searching. For that reason, establishing standardized terminologies and diagnostic tools as well as conducting more systematic and analytic researches are necessary for supporting clinical evidence of efficacy of TM for CHFS.

Conclusions: This study can provide useful information for designing of future clinical trials on the CHFS in TM field.

P-166**A retrospective study comparing the recurrence of chronic subdural hematoma after treatment by burr hole surgery with and without postoperative administration of goreisan**

Kouichiro Okamoto, Tetsuo Hara

Neurosurgery. National Center for Global Health and Medicine 1, 1-21-1 Toyama, Shinjyuku-ku, Tokyo 162-8655, Japan

Background. Several studies of goreisan (Kampo, traditional Japanese medicine) for the treatment of chronic subdural hematoma (CSDH) have been reported.

We retrospectively compared the treatment outcomes of burr hole surgery only and burr hole surgery with postoperative administration of goreisan in CSDH patients.

Objectives. The aim of this retrospective study was to evaluate the recurrence rate of CSDH in elderly patients treated with surgery only or surgery with postoperative administration of goreisan.

Methods. The subjects comprised 171 patients who were newly diagnosed with CSDH and underwent burr hole surgery only (n=39; Group A)

Or surgery with postoperative administration of goreisan (n=132; Group B) at our hospital between April 2010 and September 2014.

Results. The recurrence rates in Group A and B were 15.4% and 5.3%, respectively ($p = 0.02$)

Discussion. Among the elderly patients with CSDH, the recurrence rate was lower for those who underwent burr hole surgery with postoperative administration of goreisan than those who underwent surgery only.

Conclusions. Among the elderly patients with CSDH, the recurrence rate was lower for those who underwent burr hole surgery with postoperative administration of goreisan than those who underwent surgery only.

P-167**The effectiveness of the quality of sleep in Qigong exercise: A systematic review**

Lin, Yu-Chi^{1,2}, Chen, Ching-Hsiu^{3*}, Wu, Ching-Yi⁴

¹*Practice teacher and teaching assistants, Department of Nursing, Yuh-ing Junior College of Health Care & Management, Kaohsiung, Taiwan.*

²*Master Student, Department of Nursing, Fooyin University, Kaohsiung, Taiwan.*

^{3*}*Assistant Professor, Department of Nursing, Fooyin University, Kaohsiung, Taiwan.*

⁴*Master Student, Department of Nursing, Fooyin University, Kaohsiung, Taiwan.*

E-mail:julie.martin@msa.hinet.net

Background. Qigong is the traditional Chinese medicine exercise to improve sleep quality of the chronic disease adults.

Objectives. Our aim was to conduct a systematic review of studies evaluating qigong exercise for quality of sleep.

Methods. Electronic databases including PubMed CINAHL, Cochrane Library, EMCAM, Taiwan and Chinese databases were searched through Jun 2004 to Dec 2014. Randomized trials comparing qigong and standard-of-care control were included that measured outcomes of fatigue and quality of sleep and were published in English and Chinese. Two (2) reviewers independently assessed trial eligibility, quality, and abstracted data to a standardized form. Standardized mean differences (SMD) were calculated for studies using a fatigue score or quality of sleep requirement as a primary outcome.

Results. Eighteen (18) studies met inclusion criteria quality of sleep. To exclusion one study has no pre-post data. Qigong was superior to controls for studies evaluating quality of sleep (SMD, -0.85 [95% confidence interval (CI): -0.97, -0.73]; 17 studies). Removal of poor quality studies did not alter the conclusions.

Discussion. The available data from results showed qigong may be effective for alleviates the quality of sleep in people.

Conclusions. Therefore these results were limited by the small number of trials. A more accurate estimate of the effect will require further large, well-designed RCTs with rigorous methods of randomized, adequately concealed allocation, and continuous effects in order to more clearly to promote qigong exercise.

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Development a visual algorithm to realize quantitative pulse condition: normal pulse and tight pulse.

Chun-Jen Su¹, Ching-Hsing Luo¹, Cheng-Ying Chung¹, Ting-Yi Huang¹

¹*Department of Electrical Engineering, National Cheng Kung University, Tainan 70101, Taiwan*

Background.

The Science of Chinese Medicine (CM) has been developed over three thousand years. In clinical diagnosis, CM physicians use their fingertips to diagnose and to classify pulse condition. However, this method is a qualitative way to determine pulse conditions rather than quantitative one, and make CM difficult to learn and to inherit.

Objectives.

The aim of this study is to propose a visible way to reconstruct the pulse condition with multi-dimension pulse mapping (MDPM). This visible technique is used not only to quantitatively determine the pulse conditions, but also to record the physician's finger-reading skills.

Methods.

This study took advantage of pulse diagnosis instrument (PDI) to record radial pulse waveforms. A 12-point (3*4) array sensor is placed on the three mechanical fingers which are driven by three steps motors in z axes, respectively. The MDPM which contains three dimension pulse mapping (3DPM) and dynamic two dimension pulse mapping (D2DPM) was reconstructed by array sensors after sampling, and the contour analysis was used to quantify MDPM.

Results.

In normal pulse of contour analysis, the longitudinal length of 3DPM was 1.76 ± 0.48 unit lengths and the transverse length of 3DPM was 1.04 ± 0.76 unit lengths. In D2DPM was 1.80 ± 0.42 and 10.30 ± 3.37 unit lengths, respectively. In tight pulse of contour analysis, the longitudinal length of 3DPM was 2.83 ± 0.34 unit lengths and transverse length of 3DPM was 1.06 ± 0.16 unit length, and in D2DPM was 2.24 ± 0.42 and 13.85 ± 4.53 unit length, respectively.

Discussion.

Even though the result showed significant difference between normal pulses and tight pulses, the transverse length of 3DPM was no significantly change. It might be related to CM pulse diagnosis theory which always describes it in longitudinal vector or in blood flow; nevertheless, it also proved the feasibility of CM theory.

Conclusions.

This quantitative way which normal and tight pulse are successfully identified is developed by MDPM; furthermore, MDPM provides an immediately visual image to improve rough qualitative pulse condition.

Background. Influenza virus infection is a global health concern. Influenza vaccine is an useful prophylaxis for viral infection. The primary site of influenza infection is the nasal cavity. Intranasal inoculation of influenza HA vaccine has been tried to increase its safety. However, vaccinations in the nasal cavity have been shown to be less effective than subcutaneous vaccinations.

Objectives. Oral administration of the Kampo medicine has been used for treatment of cold syndromes. The IgA antibodies in the secretions play a major role in protecting us from viral infections in mucosal areas. The IgG antibodies also are important in neutralizing virus particles in the blood. Some Kampo medicines are reported to modulate immune responses. Therefore, in this study we investigate Kampo medicine to increase the IgA antibodies in mucosal secretions, and the IgG antibodies in sera. Oral adjuvant activity of Kampo medicine when used in conjunction with nasal influenza vaccine is also investigated.

Methods. BALB/c mice were orally administered at the dose of 500 mg/kg/day of Maoto or Bakumonto in water for two weeks, and vaccinated by an intranasal inoculation of influenza vaccine. The mice were given a secondary oral administration of Maoto or Bakumonto at the same dose of the primary administration for two weeks. The amounts of IgA antibodies and IgG antibodies in mice sera and bronchoalveolar lavage fluids were measured by ELISA assay.

Results. In primary oral administration of Kampo medicine, Maoto significantly increased the amounts of IgA antibodies in bronchoalveolar lavage fluids. In secondary oral administration of Kampo medicine combined with nasal influenza vaccine, Maoto significantly increased the amounts of IgA, IgG antibodies in bronchoalveolar lavage fluids and sera.

Discussion. Intranasal administration of influenza HA vaccine with adjuvants is effective for protection against influenza virus infection. In this study we found that Maoto, which enhance mucosal immune system, are used for an oral adjuvant. Maoto increased IgA, IgG antibodies in bronchoalveolar lavage fluids and sera.

Conclusions. It is speculated that combination of Maoto with nasal influenza vaccine is useful for the protection of influenza virus infection.

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The effects of meditation for fatigue of heart failure patients

Chen, Lin-Tzn¹, Chen, Ching -Hsiu^{2*} (Corresponding author)

¹*Master Student, Department of Nursing, Fooyin University, Kaohsiung, Taiwan.*

²*Assistant Professor, Department of Nursing, Fooyin University, Kaohsiung, Taiwan. E-mail:julie.martin@msa.hinet.net*

Background: Heart failure patients often experience hemodynamic insufficiency that they were feel weakness, fatigue, activity intolerance, and mental and emotional aspects of anxiety.

Objectives: The purpose of this study was to evaluate the effects of meditation for fatigue of heart failure patients.

Methods: This pilot study used a pre-experimental, one-group pretest-posttest design. The participants were heart failure patients in Kaohsiung hospital, in Taiwan. All participants received the interventions was twice time a day, at least 10 minutes each time. The interventions of meditation included the relaxing music listening, deep abdominal breathing and companionship. Evaluate the improvement outcomes by heart rate, respiratory rate, blood pressure and questionnaire (Concise Taiwan Scale for Fatigue, CTSF). Data analyzed using SPSS 22.0 statistical software windows version and signed-rank test.

Results: The results showed that subject's (n=14) average age was 69.14±19.69years. The male were 57.1% (n = 8), and female were 42.9% (n= 6). The education included high school 50.1% (n=7), junior school 7.1% (n=1), elementary school 21.4% (n=3), and illiterate 21.4 % (n=3). After the interventions, there were statistically significant in heart rate (p=0.002), respiratory rate (p=0.001), systolic blood pressure (p=0.007) and CTSF (p=0.001) .The result were showed none statistically significant in diastolic pressure (p=0.432).

Discussion: Meditation was able to improvements the fatigue status of heart failure patients in this study.

Conclusions: The result from this study support that non-invasive of meditation can significantly improve hemodynamic, tolerance for activity and application of this technique may improve a patient's comfort during heart failure symptoms of treatment in hospital.

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Reduced dementia in non-hemorrhagic stroke patients received acupuncture treatment: A nationwide matched-cohort study

Chun-Chuan Shih^{1,2}

¹*School of Chinese Medicine for Post-Baccalaureate, I-Shou University, Kaohsiung, Taiwan;* ²*Ph.D. Program for Clinical Drug Discovery from Botanical Herbs, Taipei Medical University, Taipei, Taiwan*

Background: The effectiveness of acupuncture on post-stroke rehabilitation was approved. While dementia is a common health problem for stroke patients, how to prevent post-stroke dementia is unclear.

Objectives: The aim of this study is to investigate the effects of acupuncture treatment on reducing risk of dementia in patients with stroke.

Methods: We conducted a cohort study of 5610 newly-diagnosed stroke patients receiving acupuncture treatment and 5610 propensity score-matched stroke patients who did not receive acupuncture treatment from 23 million people in Taiwan between 2000 and 2004. Both cohorts were followed until the end of 2009 with adjustment for immortal time to investigate incident dementia. We calculated adjusted hazard ratios (HRs) with 95% confidence intervals (CIs) of post-stroke dementia associated with acupuncture treatment.

Results: Acupuncture treatment was associated with a decreased risk of dementia with multivariate adjustment (HR, 0.73; 95% CI, 0.66-0.80), and the association was significant in both sexes, every age group, as well as in groups with ischemic stroke, with fewer medical conditions, and those hospitalized after stroke. Stroke patients received acupuncture treatment and conventional rehabilitation was associated with an significant reduced risk of post-stroke dementia (HR, 0.64; 95% CI, 0.56-0.74).

Discussion: The first limitation is our insurance claims data that lacked information on clinical risk scores and lifestyle. Second, our study could not validate the actual acupuncture points used in treatment. Third, we could not confirm that all physicians performed the same procedures or used the same acupuncture points.

Conclusions: This study raises the possibility that patients with non-hemorrhagic stroke who received acupuncture had reduced risk of dementia. Results suggest the need of prospective sham-controlled and randomized trials to establish the efficacy of acupuncture in preventing dementia.

P-172 A systematic review of cinnamon in patients with diabetes

Mei Su Chiang¹, Hsiao Yun Chang², Su Yu Fang³

^{1,3} *Kaohsiung Chang Gung Memorial Hospital, 123 Dapi Rd. Niasng Dist, Kaohsiung City 83301 Taiwan.*

² *Fooyin University, 151 Jinxue Rd., Daliao Dist., Kaohsiung City, Taiwan.*

Background. Cinnamon is a spice belonging to Tradition Chinese medicine and the active ingredient is hydroxychalcone, which may increase insulin sensitivity to improve the control of blood sugar in patient with type 2 diabetes. However, limited information regarding empirical results was found for the integration of cinnamon intervention research in literature.

Objectives. This study is to systematically review the effect of cinnamon on lowering blood sugar in patient with type 2 diabetes.

Methods. We searched seven electronic databases using inclusion and exclusion criteria to screen the eligible research and assessing the quality by Modified Jadad Scale. There are three standard randomized controlled trial were met the criteria with type 2 diabeticpatients.

Results. The number of participants ranged from 37-70 people with a total of 176 people in the studies. Most participants were women (female ratio > 50%). The average age of the study ranged from 33.6 to 66.7 years. The results showed that daily doses of 3 g cinnamon effectively reduce blood sugar, blood lipids; however, not for the control of blood pressure and liver function.

Discussion. This systematic literature review showed that cinnamon intervention have significant effect on blood glucose, blood lipids, but no obvious effect on blood pressure and liver function.

Conclusions. It is needed to design a larger and consistent intervention research to build up more reference to the empirical data.

P-173**Analysis among Tongue and heart rate variability in obese adults and it's relationship with metabolic syndrome**

Tsung-Chieh Lee¹, Lun-Chien Lo², Fang-Chen Wu^{3*}

¹Department of Chinese medicine, Changhua Christian hospital, Taiwan

²Department and Graduate Institute of Mathematics, National Changhua University of Education, Taiwan

³Department of BioIndustry Technology DAYEH UNIVERSITY

Background. Traditional Chinese medicine (TCM) means that obesity classified as phlegm-dampness. It often accompanied with qi stagnation and blood stasis. We use the modern tongue analysis and heart rate variability devices for data analysis. Otherwise we also use CNAQ (Council on Nutrition Appetite Questionnaire) for appetite evaluation.

Objectives. Our results can realize the relationship among the Chinese medicine pattern、 nutrition appetite and heart rate variability in obesity patients with metabolic syndrome.

Methods. We survey the overweight patients visited the Changhua Christian hospital department of Chinese medicine. In the study rolled in, there were all informed the study and consent form signed. The study was approved by the Changhua Christian hospital. Informed consent were obtained from the patients before the data collected. The study group were divided into two group as metabolic syndrome group (MetS) and non-metabolic syndrome group (nMetS).

Results. It was a cross-sectional study and 97 patients were enrolled. People and selected from Changhua Christian hospital. Patients with obesity were rolled. The tongue color was no difference between two groups. However the tongue coating in the non-metabolic syndrome (nMetS) group with white coating about 79.6% and yellowish 20.4%. The metabolic syndrome (MetS) group with white coating 100% and yellowish coating 0%. The different between the groups are significantly($p=0.002$). The sum of the CNAQ scores were difference in the efficacy between the two groups. The 8-items also have significant difference in variation ($p<0.01$).

Discussion. The yellowish tongue coating often means the hot constitutions in traditional Chinese medicine (TCM) and also means high energy. We can hypothesis the yellowish tongue coating patients with better metabolic. And the heart rate variability can be index to advanced analysis the relationship between the yellowish tongue coating and the heart rate variability.

Conclusions. The study found the metabolic syndrome (MetS) group have cold pattern than the non-metabolic syndrome group (nMetS) who with hot pattern. This results can indicated the metabolic syndrome patients of have cold Chinese pattern easily lead to the fat deposition even poor appetite.

P-174 Effectiveness of Yokukansankachimpihange for the treatment of behavioral and psychological symptoms of dementia

Atsushi Yamamoto^{1,2}, Atsushi Niizawa^{1,3}, Nobukazu Horie¹, Kaori Kobayashi⁴,
Masumi Shozu⁴, Seiko Shirai⁵, Yusuke Inoue⁵, Atsuko Adachi⁵

¹*Department of Japanese Oriental Medicine, Kobe Century Memorial Hospital, Hyogo, Japan.*

²*Department of Dermatology, National Hospital Organization Kobe Medical Center, Hyogo, Japan.*

³*Niizawa Internal Medicine and Kampo Clinic, Hyogo, Japan.* ⁴*Department of Nursing, Hyogo Prefectural Kakogawa Medical Center, Hyogo, Japan.* ⁵*Department of Dermatology, Hyogo Prefectural Kakogawa Medical Center, Hyogo, Japan*

Objective: To investigate the effectiveness of yokukansankachimpihange (EK-83) for treating the positive behavioral and psychological symptoms of dementia (BPSD). Methods: Subjects who were admitted to the dermatology or urology departments with BPSD, such as irritability and impulsivity, and who caused difficulty for the nursing team, were treated with EK-83 for 1 week. We used the dementia balance check (DBC) sheet to assess positive dementia symptoms and a new clinical scale for rating of activities of daily living in the elderly (N-ADL) to assess daily living activities. Subjects were evaluated at baseline and 1 week after administration of EK-83.

Results: Thirteen patients completed the trial. DBC positive symptom score decreased from 11.1 ± 3.77 at baseline to 6.62 ± 4.72 ($p < 0.05$) 1 week after EK-83 administration. In particular, the features bothersome to the nursing staff, i.e., care resistance, insomnia, and frequent nurse calls, improved significantly. N-ADL score after 1 week was not significantly different from that at baseline.

Conclusion: The DBC positive symptom score improved significantly after administration of EK-83 for 1 week in patients with positive BPSD.

Kew Words: Yokukansankachimpihange (EK-83), Dementia, BPSD, positive symptoms

P-175 **10-minute-triage for acute headache with Goreisan (五苓散) and Goshuyutou (呉茱萸湯)**

Tadashi Matsuda, M.D., Ph.D.¹

¹*Misato Family Clinic, Misato-shi, Saitama, JAPAN*

Background. Headache is one of the most commonly encountered symptoms for general practitioners (GPs). Sometimes patients with acute splitting headache have visited GPs, then we have wondered whether we should refer them to the flagship hospital for head CT scan or head MRI & MRA. We have investigated effectiveness of combination therapy with Goreisan and Goshuyuto for acute headache in order to eliminate patients who have not been necessary for further examination.

Objectives and Methods. Subjects are patients with acute splitting headache who had visited our clinic from January 5th through September 30th in 2015. Cases having focal sign, meningeal sign, frequent vomiting or high fever were excluded, therefore 72 patients were eligible for this study. Subject age: 7y.o - 74y.o, Sex: female/male =53/19. All patients were given Goreisan and Goshuyuto orally, then numerical rating scale (NRS) of each headache had been obtained 10 minutes after intervention.

Results. Goreisan and Goshuyuto have shown effective in 58 patients (80.1%) within 10 minutes after intervention. In some cases splitting headache had been completely disappeared within 5 minutes.

NRS 3/10 or less were shown in 25 patients (25/58; 43.1%),

NRS 4/10-5/10 were shown in 25 patients (25/58; 43.1%)

NRS 6/10-8/10 were shown in 8 patients (8/58; 13.8%), who had given another Goreisan and Goshuyuto 15 minutes later after first intervention, subsequently all NRS of this group had dropped below 3/10 after second intervention.

On the other hand, causes of non-responders (n=14) to intervention were due to dissection of basilar artery found by MRA, brain tumor (suprasellar tumor) found by MRI, cervical disc herniation found by a plastic surgeon, 2 cases of sinusitis found by CT or MRI, and 4 cases of mental disorders (such as depression or panic attack or stress induced). 5 cases were idiopathic.

Conclusions. No response to combination therapy with Goreisan and Goshuyuto for acute headache allows us easily to distinguish patients who should be immediately referred to the hospital from others, suggesting would be useful not only for GPs but also emergency medical care.

P-176**Effect of electroacupuncture at bilateral ST36 acupoints on acid saline-induced fibromyalgia pain**

Kun-Ta Lee¹, Yi-Wen Lin^{1,2}, Ching-Liang Hsieh³

¹*Graduate Institute of Acupuncture Science, China Medical University, No.91, Hsueh-Shih Road, Taiwan*

²*Research Center for Chinese Medicine & Acupuncture, China Medical University, No.91, Hsueh-Shih Road, Taiwan.*

³*College of Chinese Medicine, Graduate Institute of Integrative Medicine, China Medical University, No.91, Hsueh-Shih Road, Taiwan.*

Background: Acupuncture has been clinically proven effective in pain relief by the WHO and has been widely used by medical practitioners. Pain induced by fibromyalgia has complex physiological and psychological causes and is treated with Duloxetine, Milnacipran and Pregabalin that have the undesirable side effects of headache, nausea and diarrhea. Acupuncture, effective not only in relieving these side effects but also in alleviating the fibromyalgia-induced pain itself, can thus serve as an alternative to the standard treatment.

Objectives: The present research is focused on how acupuncture suppresses fibromyalgia-induced pain and its mechanisms in the thalamus and the amygdala.

Methods. Electroacupuncture (EA) at 2HZ, 1mA, and 150 microseconds for 15 minutes was administered to mice bilateral Zusanli point (ST36) after induction of FM. The mice were then sacrificed and their brain tissues (thalamus and amygdala) were collected for immunohistochemistry staining.

Results: Immunohistochemical staining showed the presence of TRPV1 and pERK in the thalamus and the amygdala. Significant decreases of both proteins in these regions were clearly observed after EA manipulation.

Discussion. Different noxious stimuli, like thermal, mechanical, inflammation, tissue damage, and chemical stimuli, can trigger different pain mechanisms in the nervous system. Such mechanisms generally involve receptors in the skin, the dorsal root ganglion, the spinal cord, and finally the different regions of the cerebral cortex. Here we indicate that EA is effective in suppressing FM pain and reduced TRPV1 and pERK in thalamus and amygdala.

Conclusions: EA at bilateral ST36 acupoint can reduce pain and even the amount of the TRPV1 and pERK in the thalamus and amygdala regions. Our results determine an important role of TRPV1 and pERK in mice thalamus and amygdala

Study on body constitution questionnaire and traditional chinese medicine clinic for yang-xu syndrome based on blood clinical variables in sub-healthy volunteers

Hong-Jhang Chen¹, Yii-Jeng Lin², Pei-Chen Wu¹, Wei-Hsiang Hsu³, Fang-Pei Chen², Yun-Lian Lin³

¹*National Research Institute of Chinese Medicine, Taipei 112, Taiwan*

²*Taipei Veterans General Hospital, Center for Traditional Medicine, Taipei 112, Taiwan*

³*Department of Chinese Pharmaceutical Sciences and Chinese Medicine Resources, China Medical University, Taichung 404, Taiwan*

Background. The treatment of traditional Chinese medicine (TCM) is based on syndrome differentiation (Bian Zheng Lun Zhi; Zheng classification; TCM syndrome). Recently, metabonomics, has shown a promising application prospect in its practice.

Objectives. This study aimed to assess the association between *Yang-Xu* syndrome and body constitution questionnaire (BCQ), and TCM Clinics by means of clinical blood variables.

Methods. Healthy volunteers ranging from 20 to 39 years old were recruited. Clinical blood biochemical analysis was conducted by using fasting blood samples. BCQ was used to assess the clinical manifestations of *Yang-Xu*, *Yin-Xu*, and *Stasis*. The logistic regression model, two types of cross-validation, leave-one-out cross-validation (LOOCV) and K-fold cross-validation as well as decision trees (DTs) were used to analysis their correlations.

Results. A total of 192 volunteered subjects participated in this study. Among them, 49% were classified as healthy subjects, and 39% had more than one BC. For further analysis, 130 samples were selected and divided into two groups. One group was identified as healthy subjects without any BC (68%), and the other was identified as sub-healthy subjects with three BC (32%). Six biomarkers, CRE, TSH, HB, MONO, RBC, and LH were extracted as the most impact to BCQ outcomes in *Yang-Xu* subjects..

Discussion. In this study, we found the coexistence of multiple imbalanced BC in a tested subject which is consistent with the Chinese medicine theories. As we knew, the innate immune system is composed of haematopoietic cell types, including dendritic cells, monocytes, macrophages and granulocytes, which consists of neutrophils, eosinophils, basophils, and mast cells. These cell populations collaborate with each other to promote immunity, inflammation and tissue repair. Besides, RBC and HB are part of red blood cell indices, which are blood tests that provide information about the hemoglobin content, and physical characteristics of the red blood cells.

Conclusions. From this study, significant biochemical differences were found in *Yang-Xu* subjects with BCQ by means of clinical blood variables. For further validation, more sample sizes should be performed to narrow down a more convincing digital parameter.

P-178 **Prospective double-blind randomized study on the efficacy and safety of *Antrodia cinnamomea* combined with chemotherapy in the treatment of advanced cancer**

Ming-Yen Tsai^{1,2}, Hsien-Hsueh Chiu¹, Kun-Ming, Rau¹, Yen-Hao Chen¹,
Yung-Hsiang Chen^{2,*}, and Yu-Chiang Hung^{1,*}

¹*Department of Chinese Medicine and Division of Hematology-Oncology,
Kaohsiung Chang Gung Memorial Hospital, Chang Gung University College of
Medicine, Taiwan*

²*Graduate Institute of Integrated Medicine, School of Chinese Medicine, College of
Chinese Medicine, China Medical University, Taiwan*

Background. Many cancer patients in Taiwan use complementary and alternative medicine during their current anti-cancer treatments, but limited clinical data exist regarding the evidence for the integrative medicine among in cancer population.

Objectives. *Antrodia cinnamomea* (AC) is a popular folk medicinal mushroom in Taiwan that has been widely mentioned its anti-inflammatory and anti-tumor cytotoxicity in bench studies. The aim of this study was to investigate the clinical efficacy and safety of AC given for 30 days in patients with advanced cancer receiving chemotherapy.

Methods. Patients with locally advanced and/or metastatic adenocarcinoma, performance status 0-2, and adequate organ function who had previously been treated with chemotherapy were randomly assigned to receive routine chemotherapy regimens with AC (20 ml twice daily) orally for 30 days or placebo. Six-month overall survival (OS), disease control rate (DCR), quality of life (QoL), adverse event (AE) and biochemical feature within 30 days were assessed.

Results. Thirty-seven subjects with gastric, lung, liver, breast, and colorectal cancer (17 in the AC group, 20 in the placebo group) were enrolled. Mean OSs were 5.4 months for the AC group and 5.0 months for the placebo group ($p=0.340$), and the DCRs were 41.2% and 55%, respectively ($p=0.33$). Most laboratory data did not differ significantly between both groups, but platelet counts were lower in the AC group ($p=0.02$). QoL assessments were similar in the two groups, except that the AC group showed significant improvements in QoL ($p=0.04$).

Discussion. Our study demonstrated that AC does not affect the progression of cancer when combined with chemotherapy, despite the anti-cancer effect have not been found. In the minds of many patients, AC is used for protection against oxidative damage and elimination of fatigue, our result did not find a significant benefit on fatigue or QoL-related outcomes in patients treated with AC, except for quality of sleep.

Conclusions. AC combined with chemotherapy did not improve the outcome of advanced cancer patients and might present a potential risk of lowering platelet counts. Adequately powered clinical trials will be necessary to address this question.

P-179 Change decoction to the paste form: And cover on the umbilicus to treat patient with rectal adenocarcinoma a case report

Cheng Hsiang-Wen, Chung Hsuan-Fu

Chinese medical department, Chimei Medical Center, No.901, Zhonghua Rd., Yongkang Dist., Tainan City 710, Taiwan (R.O.C)

Background.

There are a lot of preparation in Chinese medicine, such as decoction, pill, powder, glue and rich paste. However, they are all taken orally. But in the hospital, patients usually could not take medicine orally. When we face the problem, what can we do? We cannot use those medicine by IV or IM like Western Medicine. Therefore, the case report is talking about a method to help you solving this problem.

Report.

The 75-year-old female patient was a case of rectal adenocarcinoma, stage IIIC pT4aN2bM0 s/p robotic radical proctectomy on 07/26/2013. She has received CCRT-5FU on 9/30/2013 till 12/3/2013. Adjuvant chemotherapy including total 8 dose was done on 12/23/2013 till 5/25/2014. She suffered from abdominal fullness, nausea and vomiting on 05/06/2015 and came to the Chimei Hospital Emergency Room for help. Small bowel obstruction was diagnosed and she was admitted for further treatment. After admission, NPO was suggested and medical treatment was prescribed. However, the symptoms did not improve. Due to her family request, consultation with Chinese medicine was arranged on 05/26/2015.

At the first visit to the patient, the abdominal fullness, vomiting, nausea and constipation were noted. The cold-damp obstructing the spleen and stomach was diagnosed. We prescribed the HOW PWU UEN JONG TANG decocting pieces to the patient. After she drank the decoction, she vomited most of them. She said that she could not take the medicine orally. Therefore, we changed the preparation to the paste. We added the glutinous rice to the decoction and spread it on the non-woven cloth. Then, we covered the non-woven cloth on the patient's umbilicus and changed it quarter in die. Two days later, we visited the patient. She said that the abdominal fullness, vomiting and nausea improved and she could defecate by herself.

Discussion.

Glutinous rice is especially sticky when cooked. Besides, it can also warm the spleen and stomach and supply the qi of center burner. Due to its sticky and characteristics, we use it to make the paste.

Conclusions.

When patients cannot take medicine orally, acupuncture is a choice. In addition, we can use this method to help them and can also get good effect.

Yang-deficiency body constitution: A significant predictive fact or for moderate to severe cancer-related fatigue

Ming-Hsien Yeh^{1,2}, Chiu-Hei Chao¹, Shih-Chang Lee¹, Guang-Wei Chen¹,
Chiu-Yuan Chen⁴, Chia-Chou Yeh^{1,2,5}, Te-Mao Li¹

¹*Graduate Institute of Chinese Medicine, China Medical University, Taichung, Taiwan;* ²*Department of Chinese Medicine, Talin Tzu Chi General Hospital, Chiayi, Taiwan;* ³*Graduate Institute of Natural Healing Sciences, Nanhua University, Chiayi, Taiwan;* ⁴*Department of Chinese Medicine, Tzu-Chi Medical University, Hualian, Taiwan*

Background. Cancer-related fatigue (CRF) is a kind of physical and psychological fatigue, which is not relieved by rest, may cause by cancer it self or cancer treatment. In the diagnosis of cancer related fatigue, the use of Brief Fatigue Inventory –Taiwan Form (BFI-T) in cancer patient s can render cancer diagnosis and severity of CRF. Currently on CRF are still insufficient knowledge and no effective treatment method. On the other hand, traditional Chinese Medicine Constitution (TCMC) can express a patient's sustained physical changes, and may provide the knowledge of CRF and the idea of treatment.

Objectives. The aim of t his study was to survey which TCMC type acts as a predictive fact or for moderate to severe CRF.

Methods. A cross-sectional study was designed and subject s were recruited form the Chinese Medicine Department of Dalin Tzu-Chi General Hospital (Chiayi, Taiwan). The study subjects completed interview questionnaires of standardized Constitution in Chinese Medicine Questionnaire (CCMQ) and Brief Fatigue Inventory-Taiwan Form (BFI-T) .

Results. The study showed 41.2 % subject s had moderate to severe fatigue, and t here was a statistic significant association between Qi-deficiency type, Yang-deficiency type and BFI-T Form. The odds ratio on moderate to severe CRF between Yang-deficiency and non Yang-deficiency type was 6.383. Whereas Qi-deficiency and non Qi-deficiency type was 5.85.

Discussion. In constructing the hypothesis of CRF in TCM, we thought of Yang-deficiency as the significant predictive fact or in moderate to severe CRF. In this study, cool extremities, weak pulse and cool belly were observed in the moderate to severe CRF. Even under effects of fluid supplement and inotropic medication, all symptoms still persist. These three signs of Yang-deficiency are easily assessed and can also be applied by Western physicians to identify the severity of CRF, and can provided a better treatment strategy.

Conclusions. The result can be used to improve the CRF treatment in cancer patients. Using prescript ion for warming Yang-Qi or relative therapies is recommended.

P-181 Kampo therapy for peripheral neuropathy complicated with anti-cancer chemotherapy

Akimune Hayashi M.D., Ph.D.

*Department of Oriental Medicine, Kampo Support Center, Kanagawa Cancer Center,
2-3-2 Nakao, Asahi-Ku, Yokohama, 241-8515, Japan*

Background. Peripheral neuropathy due to anticancer chemotherapy is a serious complication. Currently, goshajinkigan is recognized as effective prescription, but its limitation has also become apparent. The author reports the results of goshajinkigan therapy combined with some other herbal medicines.

Objectives. From April, 2014 to June 2015, the following two groups of patients were treated with Kampo therapy. Group 1: 130 patients (male/ female: 19/111), 24-82 years old (mean age 60.7) who had developed peripheral neuropathy complicated by chemotherapy. Group 2: 34 patients (male / female: 2 / 32), 35-73 years old (mean age 57.0) who received kampo treatment for preventing peripheral neuropathy.

Methods. The effectiveness of the treatment was evaluated with numerical rating scale when the neurological improvement was stabilized. The degree of improvement of group 1 was evaluated into four categories from 0 to 100% by 25 %. They are described as excellent, good, fair, and no change, respectively.

Group 2 was assessed based on the residual nerve disorder at the completion of chemotherapy.

Results/ Group 1: excellent 35 cases (26.9.8%), good 34 cases (26.2%), fair 13 cases (10.0%), no change 28 cases (21.5%), and drop out 20cases (15.4%). Group 2: No residual nerve disorder 19 cases (55.8%), Residual nerve disorder 11cases (32.4%), and Discontinued 4 cases (11.8%).

Discussion. Peripheral neuropathy complicated with chemotherapy is a major factor for interrupting the treatment. Then proper therapies are expected to prevent or relieve the complication. Chemotherapy-induced peripheral neuropathy may show blood stagnation, qi stagnation and fluid retention in the micro-environment of peripheral nerves around peripheral nerves. The major aim to treat peripheral neuropathy is just to resolve such pathophysiological condition mentioned above and to promote a self-sustained recovery of the peripheral nerves. In recent years, Goshajinkigan has been drawing attention to relieve the complication. Goshajinkigan is a formula based on hachimijiogan(八味地黄丸) in which only a double dosage of the processing Aconite Tuber (附子) and 2 crude drugs, Achyranthis Radix (牛膝) and Plantaginis Semen (車前子) are added. So, the author intended to enforce the action of these three crude drugs. Then, Goshajinkigan (牛車腎気丸) combined with Kampo formulation for overcoming blood stagnation, such as keishibukuryogan (桂枝茯苓丸), sokeikakketsuto (疎経活血湯), tsudosan (通導散); Kampo formulation for tonifying qi such as hochuekkito (補中益気湯), kamikihito (加味帰脾湯), the processing Aconite Tuber (修治附子) which also promoting mild diuresis.

Conclusions. In this study, such arrangement of Kampo formula yielded good outcomes. Further studies are required to obtain much better arrangement.

P-182**Effectiveness of Tsuhdousan for severe lymphedema of advanced cancer patients in palliative care**

Junichi Koeda¹, Noriko Mikami¹, Kazuko Nagamura¹, Nami Yano¹,

¹*Aomori Jikeikai Hospital, Aomori pref., Japan*

Background. The therapeutic approach to lymphedema is largely dependent upon physiotherapeutic techniques. Complete decongestive therapy (CDT, also called complex decongestive therapy) refers to an empirically derived, but its effectiveness is diminished at severe illness stage in palliative care. So, we tried Kampo formula for it.

Objectives. 5 patients who had severe lymphedema of both or left lower extremities and had terminal stage cancer. 78y.o. female with bladder cancer, 80 y.o. male with colon cancer, 83y.o. with hepatocellular carcinoma, 71y.o. male with hepatocellular carcinoma and 55y.o. with rectal cancer.

Methods. We detected the cases who are administered Tsuhdousan (Kampo extract granules, Tsumura, Tokyo, Japan; 7.5g/day) for severe lymphedema, by medical records from September, 2011 to August, 2014. We evaluate effectiveness of Tsuhdousan for severe lymphedema by medical records.

Results. 5 patients were detected. They had severe lymphedema of both or left lower extremities and had terminal stage cancer. Tsuhdousan was very effective for severe lymphedema of 2 patients, mild affective of 1patient and not effective of 2 patients.

Discussion. There is no established treatment for severe lymphedema in palliative care. There are several reports about effectiveness of Kampo formulae. Almost reports are case reports, there is no research for large object. We need cohort study for large amount of patients.

Conclusions. Kampo formulae have potential to improve severe lymphedema in palliative care. Tsuhdousan is one of effective medicine for it.

P-183 Efficacy and safety of jaungo, traditional medicinal ointment, on radiation dermatitis in patients with breast cancer: A prospective, randomized controlled, single blinded, pilot study.

Jee Young Lee¹, Hye Kyung Oh¹, Han Sung Ryu¹, Lyun Ki Hyun¹, Jin Ok Kim¹, Deok-Sang Hwang², Moonkyoo Kong³, Seong Woo Yoon¹.

¹ *Department of Korean Internal Medicine, Korean Medicine Cancer Center, Kyung Hee University Hospital at Gangdong, Seoul, Republic of Korea*

² *Department of Korean Medicine Obstetrics & Gynecology, Kyung Hee University Medical Center, College of Korean Medicine, Kyung Hee University, Seoul, Republic of Korea*

³ *Department of Radiation Oncology, Kyung Hee University Medical Center, Kyung Hee University School of Medicine, Seoul, Republic of Korea*

Objectives. The traditional ointment, Jaungo, has long been used for burn but it also showed remarkable efficacy to repair dermal damage. This pilot study was designed to find out the efficacy and safety for preventing radiation dermatitis in breast cancer patients.

Methods. A single blinded randomized controlled trial was designed. Total 30 breast cancer patients undergoing radiotherapy were divided into two groups, the treatment group and the control group. In treatment group, Jaungo was applied 3 times a day for 6 consecutive weeks. In control group, the patient was observed with no treatment but was instructed to keep routine daily care with clean water and low-irritant cleaning solvents. The primary outcome measure was the toxicity grade according to the Radiation Therapy Oncology Group (RTOG) toxicity scale, which was assessed by clinicians. The pain was assessed with the Visual Analogue Scale (VAS) as the secondary outcome measure, by patients doing a self-administered questionnaire.

Results. The mean age in treatment group was 56.3±8.8 and the mean age in control group was 52.5±8.7. Every subject was female. Body mass index, Diabetes mellitus as underlying disease, the primary lesion, cancer subtype and performance status were stratified. The severity of radiation dermatitis was reduced more in treatment group. Four patients in the treatment group experienced severe toxicities while seven patients in the control group experienced same toxicities. The interval to develop radiation dermatitis did was not different from each other. The late prevalence of radiation dermatitis was statistically effective. (p-value <0.05) The treatment group experienced less extent of maximum pain but it was not statistically different. (p-value = 0.562)

Conclusions. Jaungo appeared to protect skin from radiotherapy, especially reducing the severity rather than postponing the incidence of radiation dermatitis. Although it is recommended to conduct further study with a larger sample size to clarify the efficacy, Jaungo can be applied for prevention in breast cancer patients who experience radiotherapy.

P-184

Efficacy of Kampo medicine in side effects due to hormone therapy in breast cancer patients

Hideki Okamoto^{1,2}, Akio Yagi¹, Koichi Ryu¹, Akira Morita¹, Takao Namiki¹

¹*Japanese-Oriental (Kampo) Medicine, Chiba University Graduate School of Medicine, 1-8-1 Inohana, Chuo-Ku, Chiba 260-8670, Japan*

²*Kampo Outpatient Clinic, Chiba Cancer Center, 666-2 Nitona-cho, Chuo-ku, Chiba 260-8717, Japan*

Background.

Most (hormone-sensitive) breast cancer patients receive hormone therapy which should be continued for 5 years at the least. Those patients often suffer from side effects due to hormone therapy such as hot flashes, joint pain, and fatigue.

Objectives.

This study was performed to evaluate the efficacy of Japanese traditional (Kampo) medicine in side effects due to hormone therapy in breast cancer patients.

Methods.

This is a retrospective case series study of breast cancer patients who were introduced to Kampo outpatient clinic of Chiba Cancer Center from April 2009 to January 2012. 13 patients were listed by searching our outpatients' database who suffered from hot flashes, joint pain, or fatigue caused by hormone therapy which were refractory to conventional medicine.

Results.

The most frequent side effect was hot flashes which were seen in 10 out of 13 patients. Kampo showed moderate or more response in 9 out of 10 cases who suffered from hot flashes. The second most frequent side effect was joint pain which was seen in 5 out of 13 patients. 4 out of 5 cases suffering from joint pain showed moderate or more response. The third most frequent side effect was fatigue which was seen in 4 out of 13 and Kampo was highly effective in all 4 cases.

Discussion.

Formulas improving blood stagnation were effective in most cases suffering from hot flashes, which supports previous findings reported in Japanese. Formulas containing aconite root were effective in 3 out of 4 cases with joint pain, indicating that formulas with a warming effect tend to ameliorate joint pain. No tendency was found among effective formulas for fatigue.

Conclusions.

This study showed that Kampo formulas were highly effective in almost all cases for hot flashes, joint pain, and fatigue caused by hormone therapy.

P-185***In vivo* imaging of intestinal bacterial β -glucuronidase activity via enzymatic hydrolysis of a fluorescent probe**

Ting-Yu Chen¹, Kuo-Hsiang Chuang²

¹*Ph.D. Program for the Clinical Drug Discovery from Botanical Herbs,*

²*Graduate Institute of Pharmacognosy, College of Pharmacy, Taipei Medical University, Taiwan.*

Background. Enzymatic glycoside hydrolysis of bacterial β -glucuronidase in intestinal microflora has been reported to contribute to severe chemotherapy-inducing diarrhea or colon cancer by converting inactive metabolites of drug and harmful substances to their toxic form. Prevention strategies for reduction of the enzyme activity are developing; however, an efficient method to evaluate the inhibitory effect against the bacterial β -glucuronidase in animal model is currently unavailable.

Objectives. Developing an approach to non-invasively detection of the enzyme activity of intestinal bacterial β -glucuronidase in live mice

Methods. We utilized fluorescein di- β -D-glucuronide (FDGlcU) as an optical image probe for the bacterial β -glucuronidase. *In vitro* hydrolysis of FDGlcU by bacterial β -glucuronidase was investigated by cell-base assays. For *in vivo* optical imaging experiments, intestinal bacterial β -glucuronidase activity in nude mice was serially imaged using IVIS 200 Optical Imaging System after an oral administration of FDGlcU. Also, entire large intestine was excised from the mice, then imaged immediately and after removal of feces.

Results. The fluorescence intensity of FDGlcU was proportional to its concentration and the amount of bacterial β -glucuronidase. 31.25 ng/mL of FDGlcU was enough to produce a significant fluorescence signal. In the time course of whole-body optical imaging, the fluorescence signal of β -glucuronidase activity in murine intestine was detectable as early as 2hr after FDGlcU oral administration, and strongest at the 3hr time point. Last, most of the fluorescence signal presented in the excised large intestine.

Discussion. It is the first time to directly detect the *in vivo* activity of intestinal bacterial β -glucuronidase in animal model by using optical imaging. In the past, the inhibitory effect of strategies for reducing intestinal β -glucuronidase activity was measured by *in vitro* assays and observing drug-inducing diarrhea, which are not accurate and efficient. By using the FDGlcU-based imaging, the enzyme activity can be non-invasively and serially measured. Hence, we will use FDGlcU to evaluate the inhibitory effect of a developing treatment on intestinal bacterial β -glucuronidase in the future.

Conclusions. Our results show the hydrolysis of FDGlcU, a fluorescein conjugated with D-glucuronide, can indicate the enzyme activity of intestinal bacterial β -glucuronidase *in vitro* and *in vivo*. Therefore, FDGlcU can be a useful tool to developing preventive therapies for intestinal bacterial β -glucuronidase- inducing intestinal damage.

Develop a five element pattern of healthcare model for acute lymphatic leukemia

P-186

Mei Hua Wang¹, Mei Ling Yeh², Wei Wen Wu³,

¹*Doctoral Candidate, School of Nursing, National Taipei University of Nursing and Health Sciences, No.365, Mingte Road, Peitou District, Taipei City, Taiwan.*

²*Professor, Graduate Institute of Traditional Chinese Medicine with Western Nursing, National Taipei University of Nursing and Health Sciences, No.365, Mingte Road, Peitou District, Taipei City, Taiwan.*

³*Assistant Professor, School of Nursing, National Taipei University of Nursing and Health Sciences, No.365, Mingte Road, Peitou District, Taipei City, Taiwan.*

Background. Acute lymphoblastic leukemia (ALL) is the most common cancer in children. Its treatment needs to begin soon after diagnosed because of the disease progress, and lasts two years or longer that depends on the treatment protocol being followed as well as the individual's response and recovery. Fortunately, a 5-year survival rate is up to 85% because of new chemotherapeutic agents and improvements in stem cell transplantation technology. However, incomprehensive caring models for ALL is concerned.

Objectives. This study aimed to develop a five element pattern healthcare model of ALL for children populations.

Methods. The design of this study was phenomenology. A purposive sampling of 25 participants, including five clinical nurses, two physicians, eight ALL cases and their mothers, one cancer case management nurse, and one therapy teacher. A face to face interview conducted between 40 and 60 minutes for each participants in hospital sites. Contents of the interview were applied the principle of "Bracketing" of phenomenology during the interview period. The data was analyzed and followed by the seven-step method according to Colaizzi.

Results. The results of the content analysis revealed a five element pattern healthcare model of ALL for children underwent treatment. There are wood (being with), fire (knowing), earth (doing for), metal (enabling), and water (well-being).

Discussion. The five element pattern healthcare model involves wood (being with), fire (knowing), earth (doing for), metal (enabling), and water (well-being). First, the element of being with presents compromising to control the onset and progression of ALL. Second, knowing means facing unfamiliar medical terminology. Third, doing for is making decision to back to school and self-care. Fourth, enabling means having various knowledge and psychomotor during the different treatment stages, Last, well-being presents acting self-care behaviors. Therefore, healthcare teams target to improve the quality of care for children with ALL, the five element pattern healthcare model of ALL could be used to guide integrating mind-body with other aspects for children with ALL during treatment periods.

Conclusions.

The five element pattern healthcare model of acute lymphatic leukemia was developed and could be applied for caring and assisting ALL children receiving a complete course of treatment, and even enhancing their survival.

Utilization patterns of Chinese medicine for cancer patients in Taiwan from 2007 to 2011: a population-based study

Hsuan-Shu Shen^{1,2}, Shu-Hui Wen¹

¹*Department of Public Health, College of Medicine, Tzu Chi University, Hualien, Taiwan*

²*Department of Chinese medicine, Hualien Tzu Chi General Hospital, Buddhist Tzu Chi Medical Foundation, Hualien, Taiwan*

Background : Traditional Chinese medicine was increasingly utilized to enhance the immunity system, improve the quality of life and alleviate the side effect of cancer treatment. However, few studies focused on cancer-specific Chinese medicine(CM) utilization patterns of cancer patients.

Objectives : We aim to present cancer-specific CM utilization patterns in patients with one of the top ten leading cancers in Taiwan from 2007 to 2011.

Methods : We used the Cancer dataset from Taiwan's National Health Insurance Research Database. The Cancer dataset contains complete and precise ambulatory visits among patients diagnosed with cancers. The CM usage was defined as the ambulatory visit of CM clinic accompanying with cancer diagnosis. We sought to assess the gender-specific and age-specific CM utilization prevalences for top ten leading cancers.

Results : In total, 87,604 CM users (5.21%) out of 1,682,918 cancer patients for top ten leading cancers were included between 2007 and 2011. Overall, the CM utilization rate for female breast cancer was the highest (8.34%), and for the prostate cancer was the lowest(2.6%). An increasing trend of the CM utilization rate was observed except for liver cancer. Patients with lung cancer had the highest increasing rate by 50%. The gender-specific difference in CM utilization rate was found. Among different types of cancer, males had higher CM utilization rate than females in liver, pancreas and esophagus cancer, where females had higher rate in lung, colorectal, gastric and ororal-pharynx cancer. In addition, patients aged ≤ 65 years old had more CM visits than patients aged > 65 years old. Based on diagnosis of CM ambulatory records, patients had similar coexisting diseases, such as functional disorder of stomach, insomnia, dyspepsia, constipation and cough, regardless of the type of cancer.

Discussion : This is a nationwide study to assess the cancer-specific CM utilization patterns of top 10 leading cancers. The Increasing tread of CM utilization rate and younger patients had more CM visits were consistent with previous reports. Interestingly, males had more CM utilization than females for liver, pancreas and esophagus cancer.

Conclusions : CM utilization rates were related to different cancer types, age and gender. Additionally, cancer patients with CM utilization had similar coexisting diseases. These findings might be helpful for CM physicians when treating cancer patients.

A case of complications from bacillus calmette-guérin immunotherapy in bladder cancer patient treated with Korean medicine

Ji Hye Lee¹, Hye Lim Park^{1,2}, Hye Yun Lee^{1,2}, Mi Na Hong^{1,2}, Jae Hyun Cho^{1,2}
Seong Ha Park^{1,2}, Jun-Yong Choi¹

¹*Department of Korean Internal Medicine, Pusan National University Korean Medicine Hospital, Mulgeum-eup, Yangsan city, Gyeongsangnamdo, Rep. of Korea*

²*Department of Korean Medicine, School of Korean Medicine, Pusan National University, Mulgeum-eup, Yangsan city, Gyeongsangnamdo, Rep. of Korea*

Background. Intravesical therapy with Bacillus Calmette-Guérin (BCG) has proven effects for reducing recurrence, progression and death from non-muscle-invasive bladder cancer (NMIBC). However, BCG therapy can cause various side effects and most frequent effect is BCG-induced cystitis.

Report. We treated a female patient diagnosed with NMIBC and suffering from cystitis, general weakness, abdominal pain after BCG instillation. She was treated iteratively with herbal medicine (補中益氣湯加味方 and 五淋散), acupuncture and indirect moxibustion after every 6th to 13th BCG treatment. The clinical outcomes were measured by Functional Assessment of Cancer Therapy – Bladder (FACT-BI) scale and patient's assessment of symptoms. This case showed increase in FACT-BI score and improvement in both the intensity and duration of symptoms.

Discussion. The patient was diagnosed Qi deficiency (氣虛) in Korean medicine. So she received 補中益氣湯加味方 to report a clinical case of a patient with complications of BCG therapy treated by Korean medicine interventions. This decoction together with indirect moxibustion at lower abdomen and

acupuncture might synergistically and positively act on cystitis associated symptoms

Conclusions. Korean medical interventions could potentially be an effective treatment for complication of BCG therapy. Further clinical researches are needed.

P-189**The effects of acupressure for lower-extremity lymphedema in cancer patients**

Su-Chin Lin¹, Chen Ching-Hsiu²

¹*RN, Nurse Practitioner, Department of Nursing, E-DA Hospital, and Master Student, Department of Nursing, Fooyin University, Kaohsiung, Taiwan.*

²*Assistant Professor, Department of Nursing, Fooyin University, Kaohsiung, Taiwan.*

Background. Lower-extremity lymphedema was occurrence in cancer patients that often experience swelling, pain and other uncomfortable feelings.

Objectives. The purpose of this study was to evaluate the effects of acupressure for lower-extremity lymphedema in cancer patients.

Methods. This pilot study used a pre-experimental, one-group pretest-posttest design. The participants were cancer patients with lower-extremity lymphedema in a medical center hospital in Kaohsiung, Taiwan. All participants received the interventions was 2~3 times a week, at least twenty minutes each time. Evaluate the improvement outcomes by heart rate, blood pressure, thigh circumference and Visual Analogue Scale for pain (VAS-P). Data analyzed using SPSS 22.0 statistical software windows version and signed-rank test.

Results. The results showed that subject's (n=13) average age was 55.85±8.55 years. The male were 30.8% (n=4), and female were 69.2% (n=9). The diagnosis included upper gastrointestinal cancer 38.5% (n=5), female cancer 30.8% (n=4), colon cancer 15.4% (n=2), and the others 15.4% (n=2). After the interventions, there were statistically significant in the right thigh circumference (p=0.003), left thigh circumference (p=0.006), and VAS (p=0.004). The results were showed no differences in heart rate (p=0.11), systolic blood pressure (p=0.11), and diastolic blood pressure (p=0.16).

Discussion. From these results, it was confirmed that acupuncture was reduce the symptoms of lower-extremity lymphedema in cancer patients.

Conclusions. This pilot study results suggest that acupressure is another effective method in reducing pain and lower-extremity lymphedema, although the standard procedures involved with acupressure should be carefully assessed in the future.

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A randomized-controlled study of chan-chuang qigong for patients with non-Hodgkin's lymphoma undergoing chemotherapy

Mei-Ling Yeh¹, RN, PhD, Yu-Chu Chung², RN, PhD, Tzu-Yun Chuang³,
RN, MSN

¹*Professor, School of Nursing, National Taipei University of Nursing and Health Sciences, No.365, Minte Road, Taipei City, Taiwan 11219, R.O.C. Presenter*

²*Associate Professor, Department of Nursing, Yuanpei University of Medical Technology No. 306, Yuanpei Street, Hsinchu City, Taiwan 30515, R.O.C.*

³*Assistant Head Nurse, Department of Nursing, Taipei Veterans General Hospital No.201, Sec. 2, Shipai Road., Beitou District, Taipei City, Taiwan 11217, R.O.C.*

Background: Non-Hodgkin's lymphoma is lymphoproliferative malignancies with differing patterns of behavior and responses to treatment. Chemotherapy could improve the survival rate of these patients. However, patients are at risk of experiencing many adverse physical and psychosocial effects for the treatment. Qigong may reduce these distress and side effects.

Objectives: To evaluate the physiological and psychological effects of Chan-Chuang qigong in non-Hodgkin's lymphoma patients underwent the first course of chemotherapy.

Methods: A randomized-controlled trial was used. Participants recruited from an oncology ward of medical center in Taiwan were randomly assigned to either the experimental group (n=50) receiving a 21-day Chan-Chuang qigong, or the control group (n=50) receiving none. White blood cells (WBC) counts, fatigue, sleep quality, and quality of life were assessed.

Results: Participants averaged in age 60 years. Most were males (57.4%), main care giver was spouse (53.5%), and college and higher (42.6%). There were no significant differences in demographic or clinical characteristics between groups except age ($p=.02$). After controlling age, the GEE results of fatigue showed a significant difference over time between the two groups ($p<.001$); interactions between time and group were significant, indicating time-dependent growth effects in the experimental group. Significant between-group differences were also in WBC, sleep quality, and quality of life.

Discussion: The findings of this study provide the positive evidence that Chan-Chuang qigong is effective and no harm in improving complete blood cell counts, fatigue, sleep quality, and quality of life in non-Hodgkin's lymphoma patients with chemotherapy. Chan-Chuang qigong is valuable to be as a medical intervention and with potential efficacy as an adjunct to usual medical care for non-Hodgkin's lymphoma patients, which improved side effects of chemotherapy, and quality of sleep and life. **Conclusions:** This study suggests that Chan-Chuang qigong is superior to improve complete blood cell counts, sleep quality, quality of life, and reduce specific side-effects of chemotherapy in non-Hodgkin's lymphoma patients.

The combine treatment of traditional Chinese medicine and Western medicine for dengue—An experience in Taiwan

Yu-Pei Chen¹, Yi-Hung Lin², Tien-Lin Yang¹, Hen-Hong Chang³

¹ *Department of Chinese Medicine, Tainan Hospital, Ministry of Health and Welfare, No. 125, Zhongshan Rd., Tainan City 70043, Taiwan.*

² *Department of Chinese Medicine, China Medical University Hospital, 2 Yu-de Road, Taichung, 40447, Taiwan.*

³ *School of Chinese Medicine, and Research Center for Chinese Medicine and Acupuncture, China Medical University, Taichung, Taiwan.*

Background.

Dengue is an infectious disease caused by the four dengue virus serotypes (DENV 1–4), the strain of flaviviridae, flavivirus, which is transmitted by mosquito (*Aedes albopictus* and *Aedes aegypti*). Dengue is endemic in more than 100 countries in southeast Asia, the Americas, Africa, the Western Pacific, and the Eastern Mediterranean regions, and its incidence has increased 30-fold in the past 50 years. It was estimated that 390 million people got dengue in 2013, which is three times higher than 2012, and it would be a huge task for the global medical system in the future.

Objectives.

To observe the clinical efficacy of the combine treatment of traditional Chinese medicine (TCM) and western medicine (WM) for dengue.

Methods.

A retrospective case discussion of dengue cases from Tainan Hospital since September 2015.

Results.

According to our clinical observation in Tainan Hospital in Taiwan since September 2015, the application of integrative of TCM and WM will improve clinical symptoms such as fever, headache, muscle and joint pain, fatigue, and gastrointestinal (GI) symptoms.

Discussion.

There is no specific remedy for dengue currently except supportive treatment in mainstream medicine. The vaccination does not effective against the four dengue virus serotypes. If the patient was infected by a serotype that the vaccine does not involve, the incidence of severe dengue and the severity of illness would be elevated. The typical manifestation of dengue is fever, skin rash, muscle and joint pain, leukopenia, bleeding, etc. The severe dengue could cause multi-organ failure and death. The clinical manifestations of dengue belong to febrile disease in TCM, and its development follows Wei, Qi, Ying and Xue stages. Since September 2015, more than 20 dengue patients treated by combine therapy of TCM and WM in the Tainan Hospital and the intervention of TCM can significantly improve the clinical symptoms such as fever, headache, muscle and joint pain, fatigue, and GI symptoms. According to the above, TCM has a great potential in treating dengue.

Conclusions.

The integrative treatment for the dengue patient can be significantly improved and the patient's life quality will be elevated.

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Re-finding of shanghan-lun: A retrospective cross-sectional study

Tetsuhiro Yoshino^{1,2}, Tetsuya Takada², Kenji Watanabe¹

¹*Center for Kampo Medicine, Keio University School of Medicine, Shinanomachi 35, Shinjuku-ku, Tokyo 160-8582, Japan*

²*Hiyoshi Medical Clinic, Hiyoshi 4-1-1, Kohoku-ku, Yokohama, Kanagawa 223-8526, Japan*

Background. Shanghan-lun (傷寒論) is one of essential textbook of traditional Asian medicine. It described detailed variation of an classic acute febrile disease. But it is still unclear that the symptom variety of febrile patients with upper respiratory symptoms in recent days.

Objectives. Here, we performed a single center cross-sectional study to clarify the variety of symptoms in acute phase febrile patients with upper respiratory symptoms.

Methods. A retrospective chart review was performed at Hiyoshi Medical Clinic between December 2013 and May 2015. Inclusion criteria were febrile patients with upper respiratory symptoms within 48 hours from the onset of fever. Exclusion criteria were a severe condition that needed hospitalization, and pre-exposure to anti-viral medications or any Kampo formulas. Patients' profile and symptoms at consultation were investigated, including age, sex, vaccination, time from first realization of fever over 38°C.

Results. One hundred and twelve patients were included, and female ratio was 43.1%. The median age of the patients at the time of consultation was 26.5 years old (range, 14-74). According to rapid influenza antigen test, type A was detected in 39 patients, type B 3, negative 32, and no test was performed for 28 patients. The rates of local symptoms including cough, sore throat, and nasal symptoms were increased according to time from first realization of fever. In contrast, general fatigue and muscle pain were decreased, and sweating and heat sensation were fluctuated. The data made three clusters; chill without sweating (55.3%), chill with sweating (27.7%), and sweating without chill (17.0%).

Discussion. Our results supported the classic description that the symptoms in acute febrile patients varied and changed drastically. Three clusters suggested that the classic classification of febrile disease; shanghan (傷寒) as chill without sweating, zhongfeng (中風) as chill with sweating, and wenbing (溫病) as sweating without chill.

Conclusions. We clarified variety of symptoms in acute phase febrile patients with upper respiratory symptoms. These findings support that classic textbook is still true in recent days.

**P-193 Safety of daiobotanpito in the treatment of acute diverticulitis of colon:
a prospective phase II trial**

Hiroshi Koike^{1,2}, Atsushi Nakazawa³, Yuko Horiba¹, Nobuhiro Tsukada³, Kenji Watanabe¹

¹*Center for Kampo Medicine, Keio University School of Medicine 35 Shinanomachi, Shinjuku-ku, Tokyo 160-8582, Japan;* ²*Department of General Internal Medicine, Tokyo Saiseikai Central Hospital, 1-4-17 Mita, Minato-ku, Tokyo 108-0073, Japan;* ³*Department of Internal Medicine, Tokyo Saiseikai Central Hospital, 1-4-17 Mita, Minato-ku, Tokyo 108-0073, Japan*

Background. Acute diverticulitis of colon is a common medical problem in elderly people. Ogawa reported the efficacy and safety of daiobotanpito, one formula of Japanese traditional Kampo medicine, in the treatment of acute diverticulitis retrospectively¹⁾, but its safety has not been investigated in a prospective manner.

Objectives. We prospectively investigated the safety of daiobotanpito in the treatment of acute diverticulitis of colon.

Methods. Ten patients suffered from acute diverticulitis of colon were treated with fasting, anti-bacterial agents and 7.5g per day of daiobotanpito extract for 10 days. Patients who needed surgical intervention and/or intensive care were excluded. We followed them in 11 days, and checked whether the patients had adverse reactions such as abdominal pain or diarrhea according to Common Terminology Criteria for Adverse Events (CTCAE) version 4.0.

Results. There had no serious adverse reactions. One out of ten patients had grade 2 abdominal pain and grade 2 diarrhea soon after daiobotanpito intake, which quickly recovered with discontinuation of daiobotanpito. The abdominal pain of this patient was worst at 6 days before daiobotanpito administration, and it was almost relieved when the patient took daiobotanpito. The other nine patients had strong abdominal pain from diverticulitis when they used daiobotanpito and they did not have adverse reactions.

Discussion. Daiobotanpito has been traditionally used for intestinal inflammation such as abscess. In early stage of diverticulitis with strong inflammation, daiobotanpito is expected to act as an anti-inflammatory drug safely.

Conclusions. Daiobotanpito is a safe treatment option for acute diverticulitis, especially in early stage.

References.

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P-194**The observation of humoral responses after influenza vaccination in patients with rheumatoid arthritis treated with Japanese oriental (Kampo) medicine: an observational study.**

Toshiaki Kogure¹, Naoyuki Harada, Kanoko Yamamoto, Takeshi Tatsumi

Department of Japanese Oriental Medicine, Gunma Central & General Hospital, 1-7-13 Kouncho maebashi Gunma, Japan

Background. Previous studies have suggested that patients with rheumatoid arthritis (RA) were more susceptible to infection, even before the use of corticosteroids became widespread, and this was attributed to the multiple immunological effects associated with the disease process and/or influences of antirheumatic drugs. Seasonal influenza infections are of clinical significance to RA patients, and annual influenza vaccination is recommended for most RA patients.

Objectives. The efficacy of influenza vaccination in patients treated with Japanese Oriental (Kampo) Medicine is unknown. The objectives of this study were to observe the efficacy of influenza vaccination in RA patients treated with Kampo.

Methods. Trivalent influenza subunit vaccine was administered to 45 RA patients who had received Kampo. They were divided into 2 groups: RA patients treated without MTX ("without MTX group") and treated with MTX ("with MTX group"). Antibody titers were measured before and 4 weeks after vaccination using hemagglutination inhibition assay.

Results. Geometric mean titers (GMTs) of anti-influenza antibodies significantly increased for all influenza strains. Response to the influenza vaccination in RA patients treated with Kampo was not lower than that of healthy subjects and the response in the "with MTX group" had a tendency to be higher than that in RA patients treated with MTX in the previous study. There was no significant difference in the GMT after 4 weeks between the "with MTX group" and the "without MTX group." A decreased efficacy in both seroprotection and seroconversion was not found in the "with MTX group."

Discussion. Kampo therapy may be beneficial for RA patients from the clinical viewpoint of protection against influenza virus infection as well as suppression of RA disease activity. Kampo therapies may not suppress the response to the influenza vaccination in RA patients, since Kampo medicines do not influence the function of antigen presentation in dendrite cells or macrophages.

Conclusions. These observations may open the way for further clinical trials to establish the efficacy for the influenza vaccination in RA patients treated with Kampo treatment.

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Treatments of lung diseases by treating liver, kidney and spleen with Kampo medicines or traditional Chinese medicines

Yasuyo Hijikata

Toyodo Hijikata Clinic, Kasuga 3-11-29 Ibaraki Osaka Japan

Background. Chronic lung diseases can be treated successfully, by applying five phases theory to the symptoms of lung disease results for 3 situations: (1) excessive Liver qi injures Lung qi (rebellion) (相侮 or 反侮), (2) Kidney deprives Lung qi through engendering route (child deprives mother qi (Kidney:child, Lung:mother 相生), (3) Spleen deprives Lung qi through engendering route(Spleen:mother Lung:child 相生). Preventing lung disease then requires one or more of the following approaches: (1) restraining Liver qi (sometimes with supporting Lung qi), (2) giving qi to Kidney so it will not take qi from Lung, and (3) giving qi to Spleen so it will not take qi from Lung.

Objectives. Applying Kampo or Tcm medicine, can cure patients with pulmonary disease by restoring Lung qi in the following ways: (1)suppressing hyperactive Liver qi, (2)decreasing Lung qi stolen by Kidney through engendering Lung-Kidney route through supplementation of Kidney qi,(3)decreasing Lung qi stolen by Spleen through engendering Spleen-Lung route, through supplementation of Spleen qi.

Methods. In one case, I prescribed formulas like Jia-wei-shao-yao-san (加味逍遥散), gan-mai-da-zao-tang (甘麦大枣汤) or Si-ni-san (四逆散) and others to soothe Liver to stop rebellion from Liver to Lung. In second case, I prescribed a Kidney-tonic formula like Ba-wei-di-huang-wan (八味地黄丸) so the Kidney would not deprive Lung Qi. In the final case, I prescribed a spleen-tonic formula like Chuan-si-jun-zi-tang (喘四君子汤) to give qi to Spleen so the Spleen would not deprive qi from Lung.

Results: In all three cases, lung symptoms such as cough, high susceptibility to colds and wheezing disappeared by prescribing the respective Kampo formulas mentioned above.

Conclusions. Symptoms like cough, wheezing and user susceptibility caused by Liver rebellion Lung were prevented by soothing Liver with Jia-wei-shao-yao-san and gan-mai-da-zao-tang. In the Kidney invades Lung case, giving Qi to Kidney with Ba-wei-di-huang-wan resulted in recovery from Lung trouble. In the Spleen invades Lung case, spleen-tonic formula, Chuan-si-jun-zi-tang cured the Lung disease.

Discussion. Lung diseases are cured: (1) by restraining Liver qi with soothing Liver formula, (2) supplementing Kidney qi with warming Kidney formula and (3) supplementing Spleen qi- tonic formula so as not to deprive Lung qi. These findings suggest that in the Liver rebellion Lung, Lung qi is shunted from Lung to Kidney or from Lung to Spleen through the engendering route and that five phases theory has a physiologic regulatory correlate worthy of further investigation.

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Three cases of palpitation with supraventricular or ventricular premature contraction treated successfully with hangekobokuto

Taketoshi Yamazaki¹, Takashi Mine²

¹*Cardiology Center, Rakuwakai Otowa Hospital*

²*Mine Clinic*

Background: The treatment of palpitation with supraventricular premature contraction (SVPC) or premature ventricular contraction (PVC) using modern western medicines is often difficult. We report here 3 cases of palpitation with SVPC or PVC, which were treated successfully with hangekobokuto (HKT).

Report: Case 1 is a 25-year-old woman with PVC on electrocardiogram (ECG). Case 2 is a 63-year-old man with a history of pacemaker implantation for sick sinus syndrome and catheter ablation for atrial flutter. ECG revealed atrial pacing and premature contraction. Case 3 is a 37-year-old man with PVC on ECG. Echocardiography was normal in all patients. After we prescribed HKT, their symptoms improved.

Conclusion: HKT could be a suitable herbal medicine for patients with symptomatic SVPC or PVC.

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An investigation of the use of acupuncture treatment in stroke patients in Taiwan

Shu-Wen Weng^{1,2}, Chien-Chang Liao^{1,3}, Jaung-Geng Lin¹, Chun-Chuan Shih^{4,5*}

¹*Graduate Institute of Chinese Medicine, College of Chinese Medicine, China Medical University, Taichung, Taiwan*

²*Department of Chinese Medicine, Taichung Hospital, Ministry of Health and Welfare, Taichung, Taiwan*

³*Department of Anesthesiology, Taipei Medical University Hospital, Taipei, Taiwan*

⁴*The School of Chinese Medicine for Post-Baccalaureate, I-Shou University, Kaohsiung City, Taiwan*

⁵*Department of Chinese medicine, E-DA Hospital, Kaohsiung, Taiwan*

Background. Acupuncture is considered a complementary and alternative medicine in many countries.

Objectives. The purpose of this study was to report the pattern of acupuncture use and associated factors in patients with stroke.

Methods. We used claims data from Taiwan's National Health Insurance Research Database and identified 333161 new-onset stroke patients in 2000-2008 from 23,000,000 people all over Taiwan. The use of acupuncture treatment after stroke within one year was identified. We compared sociodemographics, coexisting medical conditions, and stroke characteristics between stroke patients who did and did not receive acupuncture treatment.

Results. The use of acupuncture in stroke patients increased from 2000 to 2008. Female gender, younger age, white-collar employee status, higher income, and residence in areas with more traditional Chinese medicine physicians were factors associated with acupuncture use in stroke patients.

Ischemic stroke (odds ratio [OR] 1.73, 95% confidence interval [CI] 1.61-1.86) and longer hospitalization (OR 1.22, 95% CI 1.18-1.26) were also associated with acupuncture use. Stroke patients using rehabilitation services were more likely to have more acupuncture visits and a higher expenditure on acupuncture compared with stroke patients who did not receive rehabilitation services.

Discussion. This study has some limitation. First, we used retrospective medical claims data from health insurance claims data that lacked detailed patient information on clinical risk scores, lifestyle, physical, psychiatric, and biochemical measures. Second, our study used ICD-9-CM codes claimed by physicians for the diagnosis of stroke without clarifying the severity of disease. Finally, this study was based on cross-sectional analyses of acupuncture use in stroke patients.

Conclusions. The application of acupuncture in stroke patients is well accepted and increasing in Taiwan. The use of acupuncture in stroke patients is associated with sociodemographic factors and clinical characteristics.

P-198**A case of treatment by ninjinto for ptyalism in cerebral hemorrhagic patient**

Kazuhiro Muroga

Kurokouchi Hospital, Sagamihara city, Kanagawa Japan

Case : 77-year-old man. He had hypertension and got right thalamic hemorrhage at Nov. in XXXX-1, and admitted to another hospital. He transferred to rehabilitation hospital. He came back to home in April in XXXX, and we started house visit. He complained thalamic pain and we started kanmpo treatment, but it is not successful. In XXXX+1, while he speaking, severe ptylism was observed from left angle of mouth at every visit. His saliva was clear like water and epigastric area was cold. So ninjinto (KOTARO Nimjinto Extract Powder 2.0 g t.i.d.) was administered for ptylism. After 2 weeks, ptylism was markedly decreased and continued still now. Ninjinto is originally described in the *ShangHanLun* and in the *JinGuiYaoLue*. In Japan, ninjinto is widely used for gastrointestinal disorders like acute and chronic colitis, anorexia, epigastric discomfort. Ninjinto is used for cold state of interior and clear saliva suggests cold state. And it is known ninjinto is effective for ptylism (kida 喜唾) in Japan. His left angle mouth palsy is still existed. Ninjinto makes improvement of QOL of patient.

P-199 A case of functional dyspepsia presenting with epigastralgia that was successfully treated with Oren-gedoku-to

Hideyuki Isobe, Hachiro Isobe, Tadanori Tsuzaki, Ai Kouchi, Tomokazu Kikuchi, Hiroshi Omata, Satoru Yamaguchi, Shuuji Ohno

Department of Oriental and Integrated Medicine, Saitama Medical University

Background

The symptoms of functional dyspepsia are various, and of different degrees of severity. The organic abnormality in functional dyspepsia is usually undetectable and Western medicine tends to be ineffective. We report our experience with one patient who had not responded to treatment with Western medicine but was treated successfully with Kampo medicine.

Case presentation

The patient was a 60-year-old man who had suffered epigastralgia for a half year. After two months with continuous pain he was hospitalized for a close examination, but no physical abnormality that could explain the symptom was found. Although he continued taking a proton-pump inhibitor and a stomach medicine, the symptom did not improve. So he subsequently consulted various medical institutions, and underwent a gastric endoscopic examination six times but no abnormality was detected. After consulting the Department of Gastroenterology of Saitama Medical University Hospital, he was introduced our department. The patient said that in the previous two months he had experienced a weight loss of 5 kg. After he started taking Oren-gedoku-to, the symptom was improved in approximately one week. Two weeks later, the patient recovered his appetite and gained 2 kg of body weight. Furthermore, most of the symptoms disappeared after the second week of treatment, his appetite really improved and he could drink beer.

Discussion.

In this patient pain was considerably intense, he had lost his appetite and weight loss was remarkable. Therefore, since an organic disease was suspected he was subjected to gastric endoscopic examination many times, but, no abnormality was found, and functional dyspepsia was suspected. The patient complained of epigastric burning and when he had epigastralgia, he was associated with hot flash, flushing of the face, sweating. Therefore, because heat pattern and qi counterflow were suggested by the diagnosis by Kampo medicine, Oren-gedoku-to was given to this patient. This medicine proved effective almost immediately, and the symptoms that had persisted for approximately half a year almost disappeared after approximately one month. The prescription selected based on the diagnosis by Kampo medicine was thought to be effective.

Conclusions.

The utility of treatment with Kampo medicine for functional dyspepsia was suggested.

The use of traditional Chinese medicines associated with reduced risk of liver cirrhosis in patients with chronic hepatitis C

Jui-Ying Chu, M.D.¹, Chung-Hua Hsu, M.D., Ph.D.^{1,2}, Chia-Yu Liu, M.D.^{1,2,*}

¹*Branch of Linsen and Chinese Medicine, Taipei City Hospital, Taipei*

²*Institute of Traditional Medicine, School of Medicine, National Yang-Ming University, Taipei*

Background. The prevalence of complementary and alternative medicine usage has been increasing in patients with chronic hepatitis C (CHC). Large-scale investigations of current traditional Chinese medicine (TCM) usage trends among them have been lacking. **Objectives.** To characterize the application of TCM among patients with CHC and disclose the incidence rate of liver cirrhosis among them

Methods. This study examined data sets from the National Health Insurance Research Database in Taiwan. One cohort, with one million patients who were randomly sampled from the beneficiaries of the National Health Insurance Program from January 1 to December 31 in 2010, was chosen for analysis. Adult with age more than 20 year-old had at least one TCM outpatient clinical record from 2000 to 2011 were defined as TCM users (N=4,935), whereas patients who had no TCM outpatient records in 2010 were defined as non-TCM users (N=998). Main outcomes including the demographic data, treatment modalities and the disease distributions of them were analyzed.

Results. Overall, 83.2 % of the patients with CHC had used TCM from 2000 to 2011. Among the TCM users, 55.8% were female, and 44.2% were male ($p < 0.0001$). The utilization rate of TCM increased with age and achieved the peak in age of 40 to 64 years old ($p < 0.0001$). Herbal remedies (51.8%) were the most commonly used therapeutic approach, followed by combined therapy (46.9%) and only acupuncture (1.3%). Patients taking more interferon-alfa and ribavirin tended to visit TCM clinics (14.5% versus 9.5%, $p < 0.0001$). A further comparison of the hazard ratio of liver cirrhosis between TCM and non-TCM visits indicated that statistical reduced hazard ratio of liver cirrhosis in TCM users (0.71 in 30-180 days, and 0.36 in more than 180 days, $p < 0.001$).

Discussion and Conclusions. Our nationwide population-based study revealed the high prevalence and specific usage patterns of TCM in the patients with CHC in Taiwan. Patients taking more antiviral agents tended to visit TCM clinics. A dose related decrement in hazard ratio of liver cirrhosis in TCM users, no matter in crude or adjusted statistical method.

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Case report: Successful treatment of antibiotic-associated diarrhea with a herbal medicine, daiobotampito

Yutaka Nagata¹, Nagasaka Kazuhiko¹

¹Department of Oriental Traditional Medical Center, Suwa Central Hospital,
Tamagawa 4300, Chino, Nagano, Japan.

Background. The global prevalence of antibiotic-associated diarrhea (AAD) has increased with the greater use of antibiotics [1]. To date, various therapeutic approaches, including non-antibiotic drugs, have been considered. Even fecal microbiota transplantation has been investigated [2]. However, novel therapeutic agents are still in short supply.

Objectives. It is worthwhile to pursue new therapeutic applications of conventional therapy. In the present report, we describe an AAD case successfully treated by a Kampo preparation.

Case Presentation. We present the case of a 43-year-old female diagnosed with antibiotic-associated diarrhea. She suffered from diarrheal and hemorrhagic stool after secondary eradication of *H. pylori*. Feces examination using a rapid test for *C. difficile* was glutamate dehydrogenase (GDH) antigen-positive/toxins-negative. Vancomycin was applied for the *C. difficile* infection due to intolerance (nausea) of metronidazole. However, vancomycin treatment was a clinical failure. GDH screening test continued to be positive. Kampo treatment was requested and daiobotampito (DBT) was selected due to eligible right lower quadrant abdominal pain. Her stool abnormality successfully improved and the GDH test became negative after DBT treatment.

Discussion. In this report we presented the first case in which daiobotampito (DBT) was effective for CDI. The lower abdominal pain and tenderness of this case were compatible with the indications and an eligible pattern for treatment with DBT [3]. DBT is derived from traditional Chinese medicine and is used in Japanese traditional medicine. DBT is a prescription as Dahuang MudanTang in the *Jinkuiyaolue* text and has been used for the intestinal infection for thousands of years. DBT can be applied for colitis or appendicitis [3]. A previously published report indicated the efficacy of DBT for acute diverticulitis [4].

Conclusions. Symptoms such as diarrheal and hemorrhagic stool successfully improved after treatment with DBT. DBT may be useful for antibiotic-associated diarrhea that does not respond to antibiotics.

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P-202

An intensive case of post-operative ileus treated with integrated medicine

Hsiao-Ling Tsou, San-Jung Liu, Shu-Yun Huang

*Department of Chinese Medicine, Chi Mei Medical Center, No.901, Zhonghua Rd.,
Yongkang Dist., Taiwan (R.O.C.)*

Background. Postoperative paralytic ileus refers to obstipation and intolerance of oral intake due to nonmechanical factors that disrupt the normal coordinated propulsive motor activity of the gastrointestinal tract following abdominal or nonabdominal surgery.

Report.

A 82 year-old female with osteoarthritis was admitted to hospital for right total knee replacement, under the general anesthesia , the operation was well done on September 29, 2015 and after the operation the patient controlled analgesia was used for pain controlling. However, she suffered from nausea ,vomiting ,and progressive abdominal distension with rigidity and tenderness after operation. Non peros and total parenteral nutrition was given, naso-gastric tube was inserted for decompression and drained more than 1000mL dark-green liquid every day. She had no stool nor bowel sound heard for more than 2 weeks even though the medicines of laxatives and enema was used. Followed abdominal CT showed suspect segmental ischemia of small bowel with paralytic ileus, the patient's family didn't consent to operation due to the risk, so the ICU doctor decided to consult with Chinese medicine doctor about this case.

We treated the patient three times a week, including 20 minutes of acupuncture and 6 hours of covering the patches of Chinese medicines each time. The Chinese medicine treatment began on October 19, 2015, at this night, the patient had soft stool once and the volume of NG drainage decreased from 1050mL to 230mL. After the one-week treatment, the patient steadily had stool 2-4 times a day, her abdominal circumference changed from 110 cm to 106 cm, the volume of bowel sound was clearer, and she can finally start feeding progressively.

Discussion. The patient's symptoms of abdominal distension and constipation was spleen qi deficiency with qi stagnation , we choose the acupuncture points of stomach and spleen meridians which also was the three of the lower sea points of the six bowels and the confluence points of the eight vessels separately(ST36, ST37, ST39,SP4). We also use the scalp acupuncture area of MS3 and covered her CV8 by the patches made of Chinese medicines which warm the middle for treatments.

Conclusion. Chinese medicine can relieve the symptoms of post-operative paralytic ileus even though on an intensive case. Because acupuncture and using of the patches of Chinese medicines to cover the CV8 can stimulate the small bowel peristalsis.

Wen-Long Hu¹⁻⁴

¹*Department of Chinese Medicine, Kaohsiung Chang Gung Memorial Hospital and Chang Gung University College of Medicine, Kaohsiung, Taiwan.*

²*Kaohsiung Medical University College of Medicine, Kaohsiung, Taiwan.*

³*Fooyin University College of Nursing, Kaohsiung, Taiwan.*

⁴*Chinese Medical Association of Acupuncture, Taichung, Taiwan*

Background. A previous study has shown that laser acupuncture is a useful healing method for the treatment of visceral postmenopausal obesity in combination with a low-calorie diet. However, unrealistic expectations regarding weight loss frequently result in a failure to manage weight. In our previous study, laser acupuncture has been found to exert a therapeutic effect on simple obesity by reducing both body weight and body mass index with a non-restrictive diet protocol.

Objectives. To illustrate the advantages of laser acupuncture in obesity therapy.

Methods. Each patient was treated three times per week with a gallium aluminum arsenide Handylaser Trion (maximal power, 150 mW; wavelength, 810 nm; area of probe, 0.03 cm²; power density, 5 W/cm²; pulsed wave at Bahr frequencies) (RJ-Laser, Reimers & Janssen GmbH, Germany). The instrument was used to deliver 0.375 J of energy to each of the following points sequentially: Stomach, Hunger, ST25, ST28, ST40, SP15, and CV9. The laser was applied to each point for 5 s. Women were maintained on a normal diet and were recommended to achieve a daily energy intake calculated by the following formula: (height in cm – 70) × 0.6 × 30 kcal. The recommended daily energy intake for men was calculated as follows: (height in cm – 80) × 0.7 × 30 kcal.

Results. The mean percent reductions in body weight and body mass index were both 3.8% after four weeks of treatment. The reduction in waistline was 1 to 3.5 in.

Discussion. Laser acupuncture integrates the positive effects of acupuncture and low level lasers. Laser acupuncture was found to exert a therapeutic effect on simple obesity by reducing both body weight and body mass index. In the hands of an experienced physician, laser acupuncture can be useful in controlling obesity. Furthermore, patients demonstrate good compliance with this comfortable and non-restrictive diet protocol.

Conclusions. Laser acupuncture has the advantage of being noninvasive, aseptic, painless, safe and effective in obesity therapy.

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P-204 Assessment of pre-diabetes, type 2 diabetes, and diabetic micro-vascular complications using nailfold videocapillaroscopy

Po-Chi Hsu¹, Yu-Chuen Huang², Hen-Hong Chang², Lun-Chien Lo³

¹*Graduate institute of Chinese medicine, China medical University, Taichung, Taiwan*

²*School of Chinese Medicine, China Medical University, Taichung, Taiwan*

³*Department of Chinese medicine , Changhua Christian hospital, Changhua, Taiwan*

Background.

Diabetes mellitus (DM) is a chronic hyperglycemia and highly increasing risk of vascular complications. Nailfold videocapillaroscopy (NVC) is not only used to evaluate nailfold dermal papillary capillaries, including morphology, distribution, density and blood flow, but it is also applied to identify microvascular pattern in many rheumatic disease, particularly in systemic sclerosis and related disorders.

Objectives.

Assessment of microcirculation abnormalities in type 2 DM patients and pre-DM subjects using NVC and to evaluate the possible correlation with micro-vascular complications.

Methods.

One hundred fifteen patients with type 2 diabetes, 41 subjects with pre-DM, and 37 healthy subjects without diabetes were enrolled. All subjects underwent NVC to evaluate capillary density, length, morphology and distribution, presence of ectasia, hemorrhages, and blood flow.

Results.

Type 2 DM patients showed significantly increased alterations of reduced capillary length (29.6%), irregular distribution (35.7%), and abnormal morphology (59.1%), and NVC score compared with control subjects. In addition, pre-DM subjects had a significantly higher NVC score and greater alterations of distribution (26.8%) and morphology (48.8%) compared with control subjects. NVC score also showed a positive correlation with diabetic neuropathy and the number of micro-vascular complications.

Discussion.

Nailfold capillary abnormalities in NVC characteristics could play a part in the characterization of microangiopathy in type 2 DM subjects and pre-DM subjects.

Conclusions.

NVC identified a high frequency of microcirculation abnormalities in subjects with pre-diabetes and type 2 DM compared with control group. NVC score is also capable of detecting microvascular abnormalities in type 2 diabetic patients, which positive correlated with diabetic neuropathy and the number of microvascular complications.

P-205**Characteristics of traditional Chinese medicine usage in children with sexual precocity: A nationwide population-based study**

Yi-Chun Lin¹, Tung-Ti Chang^{1,3,4}, Hung-Rong Yen^{1,2,3}

¹*Department of Chinese Medicine, China Medical University Hospital, Taichung, Taiwan*

²*Research Center for Traditional Chinese Medicine, Department of Medical Research, China Medical University Hospital, Taichung, Taiwan*

³*School of Chinese Medicine, China Medical University, Taichung, Taiwan*

⁴*School of Post-baccalaureate Chinese Medicine, China Medical University, Taichung, Taiwan*

Background. Precocious puberty (PP) is a common problem affecting up to 29 per 100,000 girls per year, some of whom seek complementary treatment, including acupuncture and Chinese herbs. There are several studies on the efficacy of Chinese herbs. However, little is known about the treatment of PP with traditional Chinese medicine (TCM).

Objectives. To characterize the application of TCM among children with PP, we conducted a nationwide population-based study.

Methods. We screened one million randomly sampled beneficiaries of the National Health Insurance Program in Taiwan from 1996 to 2008 to identify children <18 years of age with newly diagnosed sexual precocity (ICD-9 code 259.1). The subjects were categorized according to their use of TCM.

Results. Overall, 3,495 newly diagnosed subjects with sexual precocity were included. Among these children, 1.86% (N=65) had used TCM. There were significantly more subjects with no treatment, 87.32% (N=3,052), than those with treatment, as TCM, western medicine, or both. Most TCM users received Chinese herbal remedies (98.25%), only 1.75% received acupuncture or manipulative therapies. Zhi-Bai-Di-Huang-Wan was the most frequently prescribed TCM formulation (23.73%), while Mai-Ya (*Hordei Fructus Germinatus*) was the most commonly prescribed single herb (10.87%).

Discussion. Regarding syndrome differentiation (ZHENG) according to TCM theory, prescriptions for Hot Syndrome significantly exceeded those for the Cold Syndrome in Taiwan.

Conclusions. Our study identified the characteristics and prescription patterns of TCM for children with PP in Taiwan. Further basic mechanistic studies and clinical trials are needed to confirm the therapeutic effects and mechanisms.

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Qi-deficiency in the patients with allergic disorders

Sang Woo Jung, Seung Won Kwon, Han Gyu Lee, Won Woo Choi¹, Ho Yeon Go²

¹*Department of Cardiology & Neurology, College of Korean Medicine, Kyung Hee University, Seoul, South Korea*

²*Department of Korean Internal Medicine, Semyung University, Chungju, Chungbuk, South Korea*

Background. An allergy is a hypersensitivity disorder of the immune system. It is the condition when normally harmless substances exaggerate immune re-action resulting in various symptoms. In clinics, many allergic patients suffer from general weakness and being caught by cold frequently. These can be seen easily in the patients with Qi-deficiency, because Qi is closely related with immunity

Objectives. This study was performed to assess Qi-deficiency in the Patients with Allergic Disorders.

Methods. This is a cross-sectional study. We recruited the study subjects with allergic disorders and healthy subjects. We got the information on the general characteristics, and the score of Qi-deficiency questionnaire from all of the subjects. FEIA (Fluorescence Enzyme Immunoassay) was performed by ImmunoCAP® to detect the subjects' total IgE level (IU/ml).

Results. There were one hundred eighty three subjects with allergic disorders and 211 of the control. Of the total 183 subjects with allergic disorders, there were 69 (32.7%) of urticaria, 79 (37.4%) of allergic rhinitis, 5 (2.4%) of bronchial asthma, 4 (1.9%) of anaphylaxis, and 26 (12.3%) of multi-symptoms. The subjects' general characteristics were not significantly different between the two groups. However, the allergy group had higher total IgE (198.8 ± 491.6 vs. 139.4 ± 285.1 , $P=0.019$) and the scores of the Qi-deficiency (70.1 ± 16.3 vs. 58.0 ± 19.6 , $P<0.001$) than the control.

Discussion. Allergic disorders are the results from the hyper or inadequate immune response to the various environmental factors. The allergic subjects had higher total IgE and more severe Qi-deficiency in this study. Total IgE level tends to be higher in patients with allergic disorders, and is reported to be associated with the manifestation of clinical allergic symptoms and poor outcome. In TCM (Traditional Chinese Medicine), one of the most representative functions of Qi is to defend one's own body from the toxic or organic harmful environments. So, allergic disorders have a close relationship with Qi-deficiency.

Conclusions. Considering this is the first trial to assess Qi-deficiency in the allergic subjects, it would be a basic point of the advanced further studies to prove the clinical effectiveness of some herbal medicines, which have been used for Qi-deficiency, on allergic disorders near the future.

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P-207 **Characteristics of traditional Chinese medicine users among atopic dermatitis children: a nationwide study**

Yi-Hsuan Lin^{1,2,3}, Hsing-Yu Chen^{1,2,3}, Sien-hung Yang^{1,3}

¹*Division of Chinese Internal Medicine, Center for Traditional Chinese Medicine, Chang Gung Memorial Hospital, Taoyuan, Taiwan*

²*Graduate Institute of Clinical Medical Sciences, College of Medicine, Chang Gung University, Taoyuan, Taiwan*

³*School of Traditional Chinese Medicine, College of Medicine, Chang Gung University, Taoyuan, Taiwan*

Background. Atopic dermatitis among children is an important issue due to relapsed course and nuisance skin manifestations. Traditional Chinese medicine (TCM) is one of the favorable complement treatment for atopic dermatitis children.

Objectives. The aim of this study is to demonstrate the characteristics of TCM users and explore the analyze prescriptions used to treat atopic dermatitis by using nationwide database.

Methods. ICD-9-M code 691.8 and 692.x are used to collect atopic dermatitis patients among children younger than 12 years. Age, combined diseases, living place and use of corticosteroid are used to characterize TCM users. TCM prescriptions are analyzed to explore how TCM doctor treat atopic dermatitis.

Results. In 2007, there were 13,646 atopic dermatitis children using TCM. Female (OR: 0.83 for male children), adolescence (OR: 10.0, 95% CI: 8.88- 11.15) and children with allergic rhinitis (OR: 2.44, 95% CI: 2.10- 2.85) are associated with TCM use. TCM users were less associated with corticosteroid use (35.8% of all TCM users), but the proportion of long- term use of topical corticosteroid was higher (10.6% for TCM users versus 2.0% for TCM nonusers). Chinese herbal medicine (CHM) was used by 93.7% of all TCM users and 36,398 prescriptions were made up. In average, 5.6 kinds of CHM were usually used in combination. The relations between CHM constituted a network and Xiao-Feng-San was the core treatment for atopic dermatitis.

Conclusions. This study characterizes TCM users among atopic dermatitis children and discloses the core CHM treatment. Further studies about safety and efficacy are still needed.

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A case of directing weak electrical current, developed from a five-month-pregnant mother's heartbeat converted to electrical signals, towards two acupuncture points on a child of low birth weight who has been suspected to have congenital adrenal hyperplasia.

Taiji Misumi (MD)

Mikado Clinic, Tohtorebld 3rd floor 2-4-33 Daimyo Chuo-ku Fukuoka-shi Fukuoka, Japan

Background. As has been proven with music therapy, music and sound affect both our mind and body immensely. It is thought that playing a mother's heartbeat at acupuncture points will greater stimulate a child's power to grow, when compared with playing that sound directly into the ears.

Objectives. The clarification of the relation between acupuncture points and sounds.

Methods. The heartbeat of the five-month-pregnant mother is recorded using a specially made device (i.e. the Mama Heartone 932). After the child's birth, a weak current (approx. 10 microampere), converted from the pregnant mother's heartbeat, is directed towards two acupuncture points (i.e. "Meimon" and "Shinchu") on the child through the use of adhesive pads for a period of five minutes. This treatment method has been named "heartbeat therapy".

Results. It was established that the child had 17 α -OHP at 3.1ng/ml based on the blood test he took when he was one month old. Heartbeat therapy commenced two weeks after the blood test. After one month, 17 α -OHP decreased to 0.6ng/ml. The child subsequently reached 6,580g at five months old, close to an average weight for a child his age. According to the mother, raising him was easier and more enjoyable than raising her older son who was born with average birth weight.

Discussion. The author has been researching the relationship between acupuncture points and sounds for over 30 years. Based on many of the clinical results, it has been hypothesised that there are signalling pathways that are caused by electrical signals which have multiple frequency spectrums via the acupuncture points in the body. In this case, the heartbeat of the pregnant mother was used, considering 'congenital qi' is more dominant than 'acquired qi' in infants from their birth until the time when they are capable of rolling over. Moreover, the kidney functions, which are responsible for 'congenital qi' in infants, developed completely during this stage of pregnancy, as well as the testicles and ovaries, begin producing hormones at this period of development. After five months of age, the heartbeat recorded after the mother had given birth was used, given that, at this age, a pre-birth heartbeat was no longer useful.

Conclusions. It is hypothesised that heartbeat therapy is an effective treatment for children's diseases due to the fact that it is capable of strengthening the bond between the mother and the child and the child's power to grow.

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The efficacy and safety of periocular acupoint stimulation on myopia progression in children

Hoyeol Cha¹, Aram Jung¹, Kibong Kim^{1,2}

¹*Department of Korean Pediatrics, Hospital of Korean Medicine, Pusan National University, Geumo-ro 20, Mulgeum-eup, Yangsan-si, Gyeongsangnam-do, 626-789, Rep. of Korea.*

²*Department of Korean Medicine, School of Korean Medicine, Pusan National University, Busandaehak-ro 40, Mulgeum-eup, Yangsan-si, Gyeongsangnam-do, 626-870, Rep. of Korea.*

Background. Myopia has a higher prevalence rate in eastern countries, which also have a higher rate of educational fever compared to western countries. Considering this, social costs paid for myopia will increase rapidly in Korea. Although the development of myopia treatment is necessary, there has been a lack of relevant studies.

Objectives. This study aims to produce data to support the prevention of unnecessary treatment so that increases in medical expenses can be prevented.

Methods. The objective is to evaluate the effect of periocular acupressure exerted by a medical massager for myopia. This is an open-label, prospective, single-arm, and pre & post superiority study. The subjects are 7~12-year-old myopia patients with under 5 D of spherical equivalent. A total of 16 subjects were enrolled. The selected subjects wore the massager for 15 minutes twice a day for 24 weeks. The primary endpoint is the refraction change. The secondary endpoint is the axial length change. Statistical analysis was performed at a significant level of 0.05, using a two-tailed test. The criterion for significantly improved refraction is -0.34 ± 0.50 D/6 months and that of axial length change is 0.252 mm.

Results. Children wearing the massager had a mean myopic refraction change of -0.38 ± 0.33 D (range -0.88 to 0.13 D) in right and -0.4 ± 0.26 D (range -0.75 to 0 D) in left. Axial length change of children wearing the massager was 0.21 ± 0.09 mm (range 0.11 to 0.38 mm) in right and 0.22 ± 0.1 mm (range 0.07 to 0.38 mm) in left.

Discussion. We did not include a control group because children represent a vulnerable group. This study will propose Korean medical treatment for myopia. In the future, a long-term confirmatory clinical study is necessary.

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Two cases report of Chinese herb medicine in treating children infectious aphthae ulcer

Yi-Chiao Lee, Ting-Hao Wang, Hsiang-Ling Lin, Ming-Yen Tsai*

*Department of Chinese Medicine, Kaohsiung Chang Gung Memorial Hospital and
Chang Gung University College of Medicine, Kaohsiung, Taiwan*

Background. Infectious aphthae ulcer is a common presentation to pediatric clinics. Although self-limiting, painful ulcerative lesions and inflamed mucosa can decrease oral intake and can lead to dehydration. Chinese herb medicine (CHM) is of limited efficacy and is often refused by the patient. Despite widespread use of CHM for pediatric upper respiratory disease in Taiwan, there is little evidence for its effect as antipyretics and in aiding ulcer healing for children with infectious aphthae ulcer.

Objectives. Two cases are presented to illustrate the potential effect of CHM treatment in recovery of herpangina and herpetic gingivostomatitis.

Methods. The combination of CHM formulas, which named Gan Lu Xiao Du Dan (GLXDD) and Liang Ge San (LGS), are prescribed for two patients : A 10-year-old girl with herpangina presented an acute febrile illness associated with small vesicular or ulcerative lesions on the posterior oropharyngeal structures. The patient could not be treated with western medicine because have allergy to antipyretics; the other patient was a 4-year-old boy with complaints of painful ulcers and hemorrhagic crusts on the lips. He was diagnosed with herpetic gingivostomatitis and has taken symptomatic treatments for days but in vain. Because the patients were suffering from the damp-heat syndrome by Traditional Chinese Herb (TCM) differentiation, both were treated using GLXDD and LGS with some single herbs.

Results. In case 1, fever disappeared rapidly after onset of CHM formulas prescription. No western medicine was given. In Case 2, the multiple oral ulcers and reddened and swollen gums appeared completely healed at 6-day of CHM formulas. Symptomatic treatment with antipyretics was also given in the other days. No further treatment was needed due to his good clinical condition on follow-up visits.

Discussion. Both patients had the syndrome of damp-heat, accompanied by pestilent toxin in qifen, according to the TCM diagnosis. Of these two children, the former is dampness predominant but the latter is heat predominant. The girl received GLXDD-oriented treatment focusing on dispersing the damp and heat in vivo. While the boy underwent LGS-oriented treatment to clear heat and reduce pathogenic fire.

Conclusions. It is suggested that CHM formulas could play an important role in relieving symptoms for children with infectious aphthae ulcer. Future experimental studies are warranted to examine the efficacy and mechanism of action of CHM treatment.

Noninvasive assessment of frailty in older patients with heart failure: the correlation between *Kampo*-scores and “the timed ‘up and go’ test” and cardiovascular indices with dopplerechocardiography.

Kazunari Ozaki¹, Mitsuru Kageyama^{2,3}, Tatsuya Shudo⁴, Yasushi Takeya^{5,1}, Masayasu Koyama³, Yoshio Nakamura^{1,5}, Hiromi Rakugi⁵

¹Dept. of Geriatric Med., Itami City Hospital, Itami, Japan

²Kageyama Clinic, Sakai, Japan

³Dept. of Obstetrics and Gynecology, Osaka City Univ. Grad. Sch.of Med., Osaka, Japan

⁴Budounoki Shudo Clinic, Kobe, Japan

⁵Dept. of Geriatric and General Med., Osaka Univ. Grad. Sch.of Med., Suita, Japan

Background. There are no gold standard implements for estimating risk for frailty. Gait speed is an easy, noninvasive test and is indeed an important component of testing frailty. The timed “Up and Go” Test⁽¹⁾ (TUG) is a commonly used performance-based measure of functional mobility in elderly people. Optimum design of noninvasive assessments for diastolic heart failure (HF) remains limited due to the absence of simple clinical criteria. Arithmetical scoring systems to estimate patients’ physical conditions have been induced in *Kampo*-medicine (Japanese Traditional Medicine). *Suitai*-score (water stagnation score) and *Qi* (vital energy)-deficiency-score (QD-score) are one of so-called *Kampo*-scores.

Objectives. The objective of this study is to investigate the correlation between the TUG and *Kampo*-scores and the indices with echocardiography in hemodialysis outpatients with chronic HF.

Methods. We studied 45 outpatients at the hemodialysis unit with simultaneous *Kampo*-scores and cardiographical indices with Doppler and the TUG. The TUG score on the test is the seconds it takes to complete the task (a patient stands, walks 3 m, turns, and returns to the chair and sits down). We estimated the *Kampo*-scores with medical questionnaire and physical examination. We also measured and compared *Kampo*-scores and echo-cardiographical indices and the TUG by linear regression.

Results. Some of the *Kampo*-scores (*Suitai*-score and QD-score) had strong positive correlation to the TUG [$r=0.68$, $p<0.003$, $r=0.65$, $p<0.04$,]. E/Ea (E/e') had strong positive correlation to the TUG [$r=0.70$, $p<0.00001$]. *Suitai*-score had strong positive correlation to E/Ea (E/e') [$r=0.75$, $p<0.001$].

Discussion. (A) Is early evaluation of congestive HF possible? (B) Can *Kampo*-scores be helpful for early evaluation of frailty?

Conclusions. These results and some reports suggest that *Kampo*-scores, which are simple, noninvasive and cost-effective clinical evaluations, especially *Suitai*-score and QD-score, can be used to define clinical assessment of frailty in hemodialysis outpatients with chronic HF.

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P-212**Characteristics of traditional Chinese medicine use in patients with Alzheimer's disease in Taiwan: A nationwide population-based study**

Ching-Yuan Lai, M.D.^{1,2}, Yi-Hung Chen, Ph.D.^{1,3,4}, Jen-Huai Chiang^{3,5,6}, Jaung-Geng Lin, M.D., Ph.D.^{1,4}, Mao-Feng Sun, M.D., Ph.D.^{1,3,7}, Hung-Rong Yen, M.D., Ph.D.^{1,3,7,8}

¹*School of Chinese Medicine, China Medical University, Taichung, 404, Taiwan;*

²*Department of Emergency Medicine, China Medical University Hospital, Taichung,*

404, Taiwan; ³*Research Center for Chinese Medicine & Acupuncture, China*

Medical University, Taichung, 404, Taiwan; ⁴*Graduate Institute of Acupuncture*

Science, China Medical University, Taichung, 404, Taiwan; ⁵*Health Data*

Management Office, China Medical University Hospital, Taichung, 404, Taiwan;

⁶*Graduate Institute of Integrated Medicine, China Medical University, Taichung,*

404, Taiwan; ⁷*Department of Chinese Medicine, China Medical University Hospital,*

Taichung, 404, Taiwan; ⁸*Research Center for Traditional Chinese Medicine,*

Department of Medical Research, China Medical University Hospital, Taichung,

404, Taiwan.

Background. Alzheimer disease is one of the most common types of dementia. Large-scale study of traditional Chinese medicine (TCM) usage among patients with Alzheimer's disease is lacking.

Materials and methods. We analyzed one million samples randomly selected from the National Health Insurance Research Database in Taiwan. Patients (n = 1,814) newly diagnosed with Alzheimer's disease in 2001–2010 were included and then followed up until the end of 2011. They were further divided into two categories: TCM users (n = 528; 29.11%) and non-TCM users (n = 1,286; 70.89%).

Results. TCM users were younger than non-TCM users (75.66 vs. 79.26 years old). Of the TCM users, 60.61% were female. The median interval between diagnosis and the first TCM consultation was 7.92 months. The majority of the TCM users (63.64%) received only Chinese herbal remedies, 3.41% of TCM users were treated only with acupuncture or traumatology, and 32.95% used combined therapies.

Zhi-gan-cao-tang and danshen (*Radix Salviae miltiorrhizae*) were the most frequently prescribed formula and single herb, respectively. Regarding the incidence rate ratio, patients with Alzheimer's disease who had comorbid cataracts were prone to have

P-213 Clinical Efficacy of *Indigo naturalis* to treat mild-to-moderate psoriasis : A randomized, double-blind, placebo-controlled study

Hui-Man Cheng¹, Chieh-Hsi Wu¹, Shung-Te Kao¹, Tsai-Chung Li¹, Ya-Min Jan¹, Qingmin Wang², Michael Song², Dion Chen², C. Chris Huang², Yang-Chang Wu¹

¹China Medical University Hospital and China Medical University, 2 Yuh-Der Road, Taichung 40447, Taiwan

²Janssen Research & Development, LLC, 1400 McKean Road, Spring House, PA 19477, USA

Background. Psoriasis is a chronic inflammatory skin disease that afflicts approximately 1 to 3% of the world's population. Long-term use of topical agents including vitamin D and corticosteroids have been associated with adverse events such as atrophy and cutaneous events. *Indigo naturalis*, a Chinese herb known as Qing Dai, has been shown to provide clinical efficacy in patients with psoriasis recently. Previous studies about *Indigo naturalis* do have some limitations in interpretation of intra-□patient lesion and treatment comparisons.

Objectives. We investigate the pharmacological effect of *Indigo naturalis* (topical ointment) as a single topical agent to treat Chinese patients with mild-to-moderate plaque-type psoriasis in this study.

Methods. This randomized, double-blinded, placebo-controlled study was conducted at China Medical University Hospital (CMUH), Taichung, Taiwan. It was approved by the IRB of CMUH. All patients provided written informed consent. Patients were treated with *Indigo naturalis* ointment or matched placebo twice daily for 8 weeks. Whole blood and skin biopsy were collected before treatment and after the last treatment. We used Psoriasis Area and Severity Index (PASI) score to evaluate the clinical efficacy of *Indigo naturalis* to treat mild-to-moderate psoriasis.

Results. Patients were treated with *Indigo naturalis* ointment (n=16) or matched placebo (n=8) twice daily for 8 weeks. At week 8, significant improvements in mean PASI score were observed in *Indigo naturalis* - treated patients (2.64 ± 1.5) with 56.3% PASI 75 response compared with placebo-□treated patients (8.30 ± 4.0 ; $p=0.009$), with 0.0% of PASI 75 response.

Conclusions. This is the first randomized, double-blind, placebo-controlled study of topical *Indigo naturalis* ointment to treat mild-to-moderate psoriasis. Topical *Indigo naturalis* ointment was a safe and effective therapy for mild-to-moderate psoriasis.

Background

Acne, which is called pimples in western medicine, is called pulmonary wind syndrome acne in traditional medicine. It is the chronic inflammation of the hair follicle sebum, which is common between male and female at the age of 12~20. Besides, at the same stage of age, there is about eighty-five percent of male contracting it and there is about eighty percent of female contracting it.

Objectives

According to the reference, both general medicine and surgery are conducive to cure acnes. If we can combine the two ways of therapies, we will have faster and more excellent effects. The research utilized the detoxification Chinese medicinal herbs and clip acne treatment to change the constitution, eliminate the toxin in the body and eradicate serious acne.

Methods

The research utilized 32 sufferers of acne. It evaluated the level of severity score of the acne in advance. Then, researchers cured the acne with the internal traditional Chinese medicine whose function was to eliminate the toxin in the whole body, and operations on the basis of the evaluated score and the constitution of different people. After all therapies were done, the researchers evaluated the level of severity score again, compared the changes of two results, analyzed respective differences, and take photos to demonstrate their observations.

Results

32 sufferers of the acne all made prominent progress in their score after therapies. The efficiency is about 100%. We can find therapies effective by the means of photos.

Conclusions

The outcome proved that this kind of traditional Chinese medicine whose function was to eliminate the toxin in the whole body can improve the constitution, and constrain the growth of propionibacterium acnes. On the other hand, the surgery effectively eliminated pustules, deep acnes, and external lesions. The combination of the above-mentioned ways of therapies is a better method to cure the acne clinically. However, how to reduce the pain of suffers, and finish all the therapies with conducting aseptic technique (to avoid the invasion of staphylococcus aureus), and lower the opportunities about inflammation, bleeding, and the formation of scar, is what we have to pay attention to when performing surgery, and it is also the subject that we have to explore more in the future.

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Treatment network of Chinese herbal medicine for acne

Hsing-Yu Chen^{1,2,3}

¹*Division of Chinese Internal Medicine, Center for Traditional Chinese Medicine, Chang Gung Memorial Hospital, Taoyuan, Taiwan*

²*Graduate Institute of Clinical Medical Sciences, College of Medicine, Chang Gung University, Taoyuan, Taiwan*

³*School of Traditional Chinese Medicine, College of Medicine, Chang Gung University, Taoyuan, Taiwan*

Background. Acne is a highly prevalent inflammatory skin disease. Chinese herbal medicine (CHM) is commonly used for treating acne with personalized but complicated prescriptions.

Objectives. The aim of this study is to discover CHM network and core CHM treatments for acne by analyzing nationwide database.

Methods. During January 1st and December 31st, 2011, all CHM prescriptions made for acne (ICD-9 CM: 706.0 or 706.1) were included this study. Visits with acupuncture, manual therapy or other treatment modalities were excluded, and CHM visits with other diagnosis were also excluded in final analysis. Association rule mining (ARM) and social network analysis (SNA) were used to explore and demonstrate CHM network.

Results. A total of 91,129 patients used TCM, and 99% of them chose CHM as acne treatment. Most CHM users were teenagers and the number of female patients was twice higher than male. A total of 279,823 CHM prescriptions were made for acne in 2011. Qing-Shang-Fang-Feng-Tang was the most commonly used CHM (31.2% of all prescriptions), and Zhen-Ren-Huo-Ming-Yin combined with *Forsythia suspensa* (Thunb.) Vahl. (Lian Qiao) was the most commonly used CHM combination. Furthermore, 31 important CHM-CHM combinations were identified and CHM network can be built-up. Anti-inflammation and anti-bacteria effects were commonly found in CHM network, while CHM with anti-androgen, anti-depression and skin whitening effects were used concurrently.

Conclusions. The CHM combination patterns and core treatments were disclosed in this study by applying network analysis into CHM prescription database. These results were beneficial for further bench or clinical studies when choosing target CHM.

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Korean medicine treatment for 107 female patients with genital warts :

Retrospective chart review

Lee eun, Lee kyoung-yeob, Cho nae-kyoung

Roadledam Korean Medical Clinic,

Yeoksam-dong 831-24, Gangnam-gu, Seoul, South Korea

Tel : 02-558-8541, Fax : 02-558-8542, E-mail : euni28@hanmail.net

Background : Genital warts caused by human papillomavirus (HPV) infection are the disease leading to anogenital lesions. There are various treatment methods for genital warts, but the recurrence is a common disadvantage.

Purpose : To observe effects of Korean Medicine treatment for genital warts.

Methods : In a single private clinic from February 2014 to February 2015, we did retrospective chart review for 107 female patients with genital warts who had been treated by Korean Medicine. Korean Medicine treatment included herbal treatment and herbal ointment.

Results : A total of 107 patients were enrolled in this study; mean age ($\pm$ SD) 29.92 $\pm$ 8.272 years. In the type of diagnosis, new diagnosis was 38.3%(n=41) and recurrent disease was 61.7%(n=66). Complete clearance was achieved 72.9%(n=78) and CC group's treatment period was 2.6 months(range:1-7). Partial clearance-good was 16.8%(n=18), partial clearance-poor was 2.8%(n=3), non response was 7.5%(n=8) and the average treatment period was 4.0 months(range:1-10). In complete clearance group, the prevalence of less than 1 year were statistically significant($p<0.05$). There was no recurrence of genital warts after TKM treatment during follow-up period(6-15months).

Conclusion : This study suggest that Korean Medicine may be an effective treatment for genital warts.

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An improved case of excessive sweating on palms in a 6-year-old girl by use of Sanmotsuogonto

Koki Chiba¹, Koichiro Tanaka¹, Kazuhiko Nara¹, Yoshinari Kono¹, Hidetoshi Itakura¹, Kazuhiro Yoshida¹, Takanori Matsuoka¹, Tsukasa Fueki^{1,2}, Makoto Hashiguchi¹, Oto Miura¹

¹Department of traditional medicine, School of Medicine, Toho University, Tokyo, Japan. ²Matsuya Pharmacy, Niigata, Japan.

Background.

Various oriental medicines are administered to treat excessive sweating. We present a case of excessive sweating in a girl improved by Sanmotsuogonto, because this medicine is not commonly used to treat like this child case in Japan.

Report.

6-year-old girl presented with excessive sweating on her bilateral palms. She tended to perspire a lot, especially when she kept her mind on watching TV, studying or writing, her hands drenched with sweat. On physical examination, her bilateral palms were reddish, warm and sticky with sweat, several scratches were on her left elbow. Her excessive sweating is considered to come from her feeling tense. We diagnosed her excessive sweating was caused by “陰虛内熱” yin deficiency and inner heat accelerated by her feeling tense. In Japan, Rokumijiogan “六味地黄丸” is commonly used for patients with excessive sweating caused by “陰虛内熱”. However in this case, we prescribed Sanmotsuogonto “三物黄芩湯” because of localized finding of palm sweating. Sanmotsuogonto “三物黄芩湯” 『金匱要略』 is commonly used to treat sensation of warmth on hand and foot in post-delivery women. After three weeks of oral administration, her excessive sweating was improved. Sanmotsuogonto could be one of choice to treat excessive sweating on palms in a 6-year-old girl caused by “陰虛内熱”.

P-218 The four cases of prurigo nodularis treated with the combination of Unseiin

(溫清飲) and drugs for overcoming blood stagnation.

Hiroshi Kakuto¹, Genki Shimizu¹, Denichiro Yamaoka^{1,2},

¹*Department of East Asian Traditional Medicine, Ehime Prefectural Central Hospital,
Kasuga-machi 83, Matsuyama, Ehime, 790-0024 Japan*

²*Department of Internal Medicine, Ehime Prefectural Niihama Hospital, Hongo 3-1-1,
Niihama, Ehime, 792-0042 Japan*

Background. Prurigo nodularis is an inflammatory disease of skin with keen skin itchiness and hard nodes, which is often incurable. We report the four cases of prurigo nodularis treated with the combination of Unseiin (溫清飲) and drugs for overcoming blood stagnation.

Report.

Case 1: 76 year-old woman

She was diagnosed as prurigo nodularis about six months ago and then treated with antihistamine or external steroids, which were ineffective. A dermatologist introduced her to us. She had many red nodes on her trunk. We prescribed decoction which is consist of Unseiin (溫清飲), Tsudosan (通導散) and Houttuynia Herb (魚腥草). These nodes have been disappeared after three month.

Case 2: 82 year-old woman

She had many nodes with keen itchiness on her trunk and legs. Extracts of Unseiin, Tudosan and Shofusan (消風散) was effective in some degree.

Case 3: 76 year-old man

His nodes exists not only on his trunk but on his head. These nodes worsened in winter. Although he felt itchness decreasing by extracts of Unseiin and Keishibukuryogan (桂枝茯苓丸) with external steroids, he dropped out for his poor adherence.

Case 4: 75 year-old woman

Her red nodes with itchiness have been gradually disappeared by the decoction of Unseiin and Tsudosan.

Discussion. We diagnosed these cases as wind as a result of blood deficiency. We also hypothesize that the fibrosis due to chronic inflammation results in blood stagnation. Consequently, the combination of Unseiin and drugs for overcoming blood stagnation is effective.

Conclusions. We experienced four cases of prurigo nodularis. The combination of Unseiin and drugs for overcoming blood stagnation is sometimes effective to treat prurigo nodularis that is thought to be incurable.

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Demographic characteristic of patients with polycystic ovarian syndrome using traditional chinese medicine : A nationwide population-based study

Jui-Ying Chu, M.D.¹, Chung-Hua Hsu, M.D., Ph.D.^{1,2}, Chia-Yu Liu, M.D.^{1,2,*}

¹*Branch of Linsen and Chinese Medicine, Taipei City Hospital, Taipei*

²*Institute of Traditional Medicine, School of Medicine, National Yang-Ming University, Taipei*

Background. The prevalence of complementary and alternative medicine usage has been increasing in patients with polycystic ovarian syndrome (PCOS). Large-scale investigations of current traditional Chinese medicine (TCM) usage trends among them have been lacking.

Objectives. To characterize the application of TCM among patients with PCOS

Methods. This study examined data sets from the National Health Insurance Research Database in Taiwan. One cohort with one million patients who were randomly sampled from the beneficiaries of the National Health Insurance Program from January 1 to December 31 in 2010, was chosen for analysis. People who had at least three outpatient or inpatient records and had been diagnosed with PCOS from 2002 to 2010 were defined as patients with PCOS (the ICD-9-CM codes 256.4, N=6400). Patients had at least one TCM outpatient clinical record were defined as TCM users (N=6055), whereas patients who had no TCM outpatient records in 2010 were defined as non-TCM users (N=345).

Results. The demographic data and the disease distributions of the TCM users with PCOS was analyzed from one randomly sampled cohort. Overall, 94.6% of the patients with PCOS had used TCM treatment from 2002 to 2010. The utilization rate of TCM increased with age and achieved the peak in age of 31 to 40 years old (N=3814, 59.6%). The disease of respiratory system and genitourinary system were the most common two diseases that PCOS patients tended to visit TCM clinics in Taiwan (24.6% and 17.3%, respectively). 79.41% people tend to visit local clinics than hospitals ($P<0.001$), and TCM users distribute mainly in Taipei than in other area (34.72%, $P<0.001$).

Discussion. Among women with PCOS, the main reason they seek for TCM treatment were about menstrual disorder (ICD-9:626.0-626.9), and inflammatory disease of cervix, vagina, and vulva (ICD-9:616.0-616.9). The association between infertility or cervical cancer and TCM usage among PCOS patients need further investigation.

Conclusions. Our nationwide population-based study revealed the high prevalence and specific usage patterns of TCM in the patients with PCOS in Taiwan. The results of this study should provide valuable information for physicians, patients and the government concerning PCOS healthcare.

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Integration of traditional and modern medicine strategy for improved pregnancy outcome with in-vitro fertilization embryo transfer in protein s deficiency

Fang-I, Liao^{1,2}

¹*Department of Traditional Chinese Medicine, China Medical University Hospital, Taichung 40447, Taiwan.*

²*Graduate Institute of Chinese Medicine, China Medical University, Taichung 40402, Taiwan*

Background. Protein S deficiency is a thrombophilic disorder which involved in female infertility with poor pregnancy outcomes such as recurrent fetal loss, pre-eclampsia, intrauterine growth restriction, and so on. Furthermore, Protein S deficiency also easily caused deep vein thrombosis and raised stroke risk due to impaired anti-coagulation condition. In modern medicine, aspirin and heparin are used to prevent thrombophilic condition during pregnancy in protein S deficiency. We performed an integration of traditional and modern medicine-combined therapy experience for further discussion.

Report. A 42-years-old female was diagnosed with protein S deficiency in infertility clinic, and she had accepted twice in-vitro fertilization with embryo transfer but failure. We performed traditional Chinese medicine with diagnosis in heart yin vacuity and kidney yang vacuity. After half-a-year treatment, the protein S improved to normal range, and she got 3rd in-vitro fertilization in China Medical University Hospital. After in-vitro fertilization protocol, we transferred 3 embryos and confirmed pregnancy with performed fetal heart beats in gestational age 7 weeks. During the pregnancy process, she took aspirin for thrombosis prevention. Unfortunately, fetal heart beat stop in gestational age 9 weeks with normal performance of yolk sac and body structure.

Discussion. According to meta-analysis report, thrombophilic disorder may influence pregnancy outcome very much for early fetal death. From experience due to this patient, we tried to correct the thrombophilic-associated condition to help improve pregnancy outcome due to improved traditional Chinese Medicine constitution. Integration of Traditional and Modern Medicine may improve pregnancy outcome in Protein S deficiency patient. We tried to establish a therapeutic program as integration medicine and discuss the underlying evidence-based medicine model.

Conclusions. Integration of Traditional and Modern Medicine may improve pregnancy outcome in Protein S deficiency patient. We tried to draw a paradigm of thrombophilic disorders and pregnancy in translational medicine viewpoint.

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P-221 The clinical effectiveness of Goshakusan, a traditional chinese medicine on the prognosis of delivery of pregnant women with cold state who have been postterm

Asako Okamura¹, Kayo Osada¹, Nami Tanaka¹, Eri Shibata¹, Kinuko Takeshima¹, Masahiro Tamano^{2,4}, Shiro Kato^{2,3,4}

¹*Tsukuba central hospital ,obstetrics and gynecology :1589-3 kashiwada-cho, Usiku-shi Ibaraki 300-1211, Japan.* ²*Kyowachuo hospital oriental medicine center : 1676-1 kadoi tikusei-shi Ibaraki 309-1195, Japan.* ³*Nogi hospital: 5320-2 Tomonuma nogi-cho simotuga-gun Tochigi 329-0101, Japan.* ⁴*University of Tsukuba Hospital: 2-1-1 Tenkubo Tukuba-shi Ibaraki 305-8576, Japan*

Background. Increase of women with cold state is regarded as a problem in recent Japan. It's said that the pregnant women with cold state come to 70 percent. Cold state is related to a prolonged labor and increase of the bleeding amount during delivery is reported. It's considered that the percentage of prompt delivery either by vaginal or by caesarian section becomes high. Goshakusan (五積散) improves sensitivity to cold. There is Goshakusan was used for difficult delivery in WAZAIKYOKUHO (和劑局方) of an original text. It was expected that a difficult delivery by the cold was improved by Goshakusan.

Objectives. We considered the clinical effectiveness of Goshakusan on the prognosis of delivery of pregnant women have unripe(closed, hard, long) uterine cervix with cold state who have been postterm .

Methods.The 22 cases within 68 childbirth from April 2013 through October for 7 months were postterm delivery. We considered 20 cases who have unripe uterine cervix with cold state . The 9 cases which requested to take Goshakusan started to take it in pregnancy for about 39 weeks. We used Goshakusan extract (TJ-63) 7.5 g before meal 3 times a day. The 11 cases were managed natural follow-up with Guideline for obstetrical Practice in Japan 2014.

Results. In taken 9 cases uterine cervix become ripe with improvement of cold state, and all cases come vaginal delivery in 40 weeks. In 11 cases of a natural course ,delivery in 41 weeks were 5 cases and it in 42 weeks was 1case, urgent caesarian section because of the fetal distress and stop of labor were 5 cases.

Discussion. Goshakusan (五積散) means 5 elements are improved.5 element are Ki (気) Ketu (血) Tan (痰) Kan (寒) Shoku (食). Pregnant women near term have a lower back and a femur tend to get cold and the gastrointestinal function tends to fall . They also become easy to swell. These tendencies match the Type(証) of Goshakusan. Goshakusan improve the cold state by acting on 5 elements and make a uterine cervix ripe (open and soften ,shorten). By making time until delivery short after term, The probability to the fetal distress and stop of labor decreases was suggested. Goshakusan was worth trying positively for such above patients.

Conclusions. It suggested the clinical effectiveness of Goshakusan on the prognosis of delivery of pregnant women have unripe uterine cervix with cold state who have been postterm.

P-222 An infertile woman who managed to get pregnant by combining *Keishibukuryogan* (桂枝茯苓丸) with acupuncture and moxibustion therapy.

Genki Shimizu¹, Hiroshi Kakuto¹, Takara Yamami², Denichiro Yamaoka^{1,3}

¹Department of East Asian Traditional Medicine, Ehime Prefectural Central Hospital, Kasuga 83, Matsuyama, Ehime 790-0024 Japan

²Department of Acupuncture and Moxibustion Care Unit, Ehime Prefectural Central Hospital, Kasuga 83, Matsuyama, Ehime 790-0024 Japan

³Department of Internal Medicine, Ehime Prefectural Niihama Hospital, Hongo 3-1-1, Niihama, Ehime 792-0042 Japan

Background. There are patients who visit the Department of East Asian Traditional Medicine in fertility treatment purposes in spite of receiving In Vitro Fertilization – Embryo Transfer (IVF-ET). We experienced a case of woman who managed to get pregnant by combining *Keishibukuryogan* (桂枝茯苓丸) with acupuncture and moxibustion therapy.

Report. 39-year-old woman. She had her first child five years ago. She became tubal pregnant four years ago and underwent surgery. After that, she became infertile. She had hoped the second child, she received a thorough examination at the university hospital. It was found that she has right tubal obstruction and hypothyroidism. She has received IVF-ET four times but it did not implant. Her first visit to our department was in March 2015. Her height was 152.2cm, body weight was 51.7kg. Her face was likely to flush, her feet was likely to get cold. Her abdomen looked strong. We thought the cause of infertility was blood stasis (瘀血). Therefore we prescribed decoction which consists of *Keishibukuryogan* (桂枝茯苓丸: 桂皮 4g, 芍薬 4g, 茯苓 4g, 牡丹皮 4g, 桃仁 4g). We also treated her by acupuncture and moxibustion. We used moxibustion points (脾俞: BL20, 三陰交: SP6, 次髎: BL32, 大巨: ST27), acupuncture points (大杼: BL11, 膈俞: BL17, 大椎: GV14, 心俞: BL15, 脾俞: BL20, 大腸俞: BL25). Although her endometrium did not have thickened more than 7mm in 2 years before she first visited our department, her endometrium was thickened to 10.5mm after one month from the first visit. After five months she has get pregnant naturally.

Discussion. In the report of the Japan Society of Obstetrics and Gynecology Society, success rate of pregnancy by in IVF-ET was 23.6% in 2010. There are problems that the treatment is expensive and needs a hospital visit frequently. It is worth East Asian Traditional Medicine is inexpensive and patients can be treated at home by laying moxibustion. Moxibustion can also be expected healing effect.

Conclusions. We experienced an infertile woman who managed to get pregnant by East Asian Traditional Medicine.

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Acupuncture in patients with osteoarthritis of the knee

Pu-Wei Hou¹, Hsin-Cheng Hsu¹, Ching-Liang Hsieh^{1,2}

¹*Department of Chinese Medicine, China Medical University Hospital, Taiwan*

²*Graduate Institute of Integrated Medicine, College of Chinese Medicine, China Medical University, Taiwan*

Background.

Osteoarthritis(OA) is one of the most common causes of pain and disability over age 50 and causes articular cartilage loss, capsular tightness, muscle weakness, bony remodeling, synovitis, ligament laxity and mal-alignment of the knee. Acupuncture has been reported treating the OA of the knee.

Objectives.

The aim of the present study was to determine whether the use of acupuncture influences symptoms or functional outcomes in patients with OA of the knee through a systematic review of randomized control trials (RCTs) from the PubMed and MEDLINE databases.

Methods.

Searching the databases is performed between 1965 and August 2013. The types of studies included in our review were 1) placebo-based or comparative studies; 2) open label, single-blinded or double-blinded studies; 3) studies evaluating the efficacy of acupuncture for OA. Trials were conducted with participants over 18 years of age with knee pain and at least three of the following characteristics: 1) an age greater than 50 years; 2) morning stiffness lasting for fewer than 30 min; 3) a crackling or grating sensation; 4) bony tenderness of the knee; 5) bony enlargement of the knee; or 6) no detectable warmth of the joint to the touch. Studies were rated for risk of bias and graded for quality.

Results.

After screening, only 12 studies were included into this review. The initial findings suggest that acupuncture is a promising intervention according to the primary outcome measure, pain. However, according to the Grades of Recommendation, Assessment, Development, and Evaluation criteria, only moderate-quality evidence was found in these studies.

Discussion.

10 of 12 studies lacked clear random sequence generation, allocation concealment, adequate assignments, intention-to-treat analysis and adequate blinding. Only 2 studies did not have serious limitations. 9 studies showed that acupuncture significantly relieved pain but 2 studies without serious limitations did not show significant pain relief following acupuncture.

Conclusions.

The initial findings of this review suggest that acupuncture is a promising intervention according to the primary outcome measures of pain but we need more studies with good quality to support.

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Effect of traditional Japanese herbal medicines for treatment of adhesive capsulitis of the shoulder

Keita Miyanishi¹, Michihiko Hirata², Kazuhiro Oribe³

¹ *Miyanishi Orthopaedics and Rheumatology Clinic, 3-13-17, Hibarū, Minami-ku, Fukuoka, 811-1355 Japan*

² *Hirata Pain Clinic, 3-8-1, Chojabaruhigashi, Kasuya-cho, Kasuya-gun, 811-2311 Japan*

³ *Oribe Clinic, 2-1-15, Ohtemachi, Oita, 870-0022, Japan*

Background.

Adhesive capsulitis of the shoulder is characterized by painful, progressive loss of active and passive shoulder motion resulting from fibrosis and contracture of the joint capsule.

Objectives.

This study examined effect of combined administration of Japanese herbal medicines, Shosaikoto and Sokeikakketsuto on pain relief in patients with adhesive capsulitis of the shoulder.

Methods.

Thirty-nine patients with adhesive capsulitis of the shoulder were given with Japanese herbal medicines, Shosaikoto and Sokeikakketsuto. Effects of these medicines were retrospectively examined based on their self-reported information. Improvement of pain with more than 50% was considered to be excellent. Improvement with less than 50% was considered to be good.

Results.

There were excellent improvement of pain in four patients (10%), good in twenty five (64%), no effect in ten (26%). None of the patients showed worsening of the pain. There were no adverse effects reported.

Discussion.

Both Shosaikoto and Sokeikakketsuto were reported to be effective for patients with periodical occurrence of symptoms, such as night pain. In this study, most of the patients presented night pain which may support usefulness of these medicines for adhesive capsulitis.

Inhibitory effect on collagen-induced arthritis in rats was reported for Baicalin, one of ingredients of Shosaikoto. This effect may contribute suppression of joint synovitis in adhesive capsulitis. Some ingredients of Sokeikakketsuto, such as Ireisen and Kyokatsu, have analgesic effects which is consistent with pain improvement in this study.

Conclusions.

The results suggest that use of Shosaikoto and Sokeikakketsuto is an option for the treatment of adhesive capsulitis of the shoulder.

Clinical effect of traditional Chinese medicine on knee pain: A nationwide population-based cohort study

Yuan-Chun Lo¹, Nian-Ze Hu^{2*}, Ying-Ling Chen³, Mark C. Hou¹, Jia-Hua Chen⁴, Tai-Wei Kuo³

¹*Department of Chinese medicine, Changhua Christian Hospital, No.135 Nanxiao Street, Changhua City, Changhua County 500, Taiwan (R.O.C.)*

²*Department of Information management, National Formosa University, No.64, Wunhua Rd., Huwei Township, Yunlin County 632, Taiwan (R.O.C.)*

³*TCM Integrated Information Center, Department of Chinese medicine, Changhua Christian Hospital, No.135 Nanxiao Street, Changhua City, Changhua County 500, Taiwan (R.O.C.)*

⁴*Department of Orthopedic, Wu Jih Cheng Ching Hospital, No.419, Guangming Rd., Wuri Dist., Taichung City 414, Taiwan (R.O.C.)*

**Nian-Ze Hu and Yuan-Chun Lo contributed equally to this study and share first authorship.*

Background. Knee pain is a chronic progressive illness that deteriorates the quality of life of elderly adults. Previous studies have indicated that knee pain can be ameliorated by acupuncture treatment.

Objectives. This study evaluated the clinical effect of the traditional Chinese medicine (TCM) on knee pain by analyzing the National Health Insurance Research Database (NHIRD) in Taiwan.

Methods. We screened 240,000 randomly selected cases from the 2010 Longitudinal Health Insurance Database (LHID), a subset of the NHIRD, between 2001 and 2010. The inclusion criteria were patients who underwent total knee arthroplasty (TKA), were older than 45 years, and received a diagnosis for arthropathies (ICD-9 Codes 710~719). The patients were categorized according to their use of TCM. Cox regression models were employed to examine the hazard ratios (HRs) of the two groups. In addition, NodeXL was applied to analyze the core patterns according to the transformative comorbidities of the two groups of patients.

Results. A total of 106 patients with knee pain were enrolled in this study: 61 were TCM users (male: female = 17:44; the mean age was 69.65±7.17 years) and 45 were non-TCM users (male: female = 10:35; the mean age was 69.9±8.32 years). The HR of TKA after knee pain was 1.044 for the TCM users (95%CI, 0.705 to 1.547) compared with non-TCM users after adjusting for gender. Hypertension was the core comorbidity pattern in both groups.

Discussion. Identifying the severity of illness is difficult in claims database studies. In our study, diagnosis of cardiovascular diseases and diabetes was introduced to control this systemic bias. We found that hypertension was the core comorbidity pattern in both groups. Thus, the illness severity in the two groups should have been adjusted.

Conclusions. Acupuncture can ameliorate knee pain; however, we found that TCM did not decrease the risk of TKA resulting from knee pain. Most patients with TKA had the comorbidity of hypertension.

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The Kampo therapy for various symptoms caused by the abnormality of cervical spine

Michihiko Hirata¹, Takurou Sonoda²

¹*Hirata Pain Clinic , 3-8-1 Choujabaru-higashi, Kasuya-cho, Kasuya-gun, Fukuoka pref. , Japan*

²*Kagoshima University Department of Anesthesiology and Critical Care Medicine, Kagoshima University ,8-35-1 Sakuragaoka, Kagoshima City, Japan*

Background. There are some cases of head ache, facial pain, tooth pain, vertigo and autonomic insufficiency that are untreatable by western medical methods. In these cases, often, the causes are identified in the cervical spine. Some of Kampo medicines are effective for these cases.

Report. Case 1; A 70y-old-woman complained occipital and temporal head ache and orbital pain on the left side. There are no abnormality on neurosurgical and orthopedic examination. Some analgesics were not so effective. These pain were induced by moving of the neck. The diagnosis by western medicine was GOTS(great occipital trigeminal syndrome). By the abdominal palpation by the method of Kampo, the tenderness on the right side of umbilicus suggesting that Jidabokuippo was effective was identified. She worried about her pain. Jidabokuippo and Kamisoyoyosan were effective and pain vanished on the third day after the administration.

Case 2; A 65y-old-women complained tooth pain. The pain exited on a left upper incisor tooth from about a year ago. The pain was persistent and was worsened by biting and touching. There was no caries. In recently, the pain of the left nose and orbital area occurred. There was no problem in examinations by otology and ophthalmology. No western analgesic were effective. At this point of time, the diagnosis by western medicine was psychogenic pain. On X ray picture, the narrowing space between C5 and C6 were identified. By Kampo examination, disorders of the body fluid metabolism, blood stagnation and tenderness on the right side of umbilicus are identified. Jidabokuippo and Kakkonkajutubuto were administered and the pain vanished after 5 weeks.

Case 3; A 17-old-boy complained that he could not wake up in the morning for 2 years. The cause of his autonomic insufficiency had not been cleared. The diagnosis was orthostatic dysregulation but midodrine hydrochloride was not effective. On X-ray picture, his cervical spine lost its physiological curve. By palpation, tenderness on the right side of umbilicus and bilateral strong tension of abdominal muscle and discomfort of hypochondrium were identified. Jidabokuippo and Shigyakusan improved his orthostatic dysregulation immediately.

Conclusion. Some of Kampo medicines improve the body fluid metabolism and blood flow in cervical area and relieve the tension of sympathetic nerve. It is considered that the effects of Kampo medicines results in improvement of pain or dysregulation.

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Analgesic effect of bee venom acupuncture and its mechanism on inflammatory pain in the rat model of collagenase-induced osteoarthritis: Mediation by opioid & adrenergic receptors

Byung-Kwan Seo¹, Yeon-Cheol Park¹, Yong-Hyeon Baek¹

¹*Department of Acupuncture & Moxibustion, College of Korean Medicine, Kyung Hee University, 26, Kyungheedae-ro, Dongdaemun-gu, Seoul, 02447, Korea*

Background. Bee venom acupuncture (BVA) has been widely used for the treatment of inflammatory pain including osteoarthritis (OA). The analgesic mechanisms of BVA in OA have not been fully elucidated.

Objectives. The purpose of this study was to investigate the analgesic effect of BVA according to acupuncture point and dose, and to find out whether the analgesic mechanisms of BVA is related with the mediation by opioid receptors or adrenergic receptors on inflammatory pain in the rat model of CIOA.

Methods. To induce CIOA, young adult male Sprague-Dawley rats were injected with collagenase solution in the left knee, following booster injection was performed 4 days after first injection. The intensity of pain was assessed using TFL. The BVA treatment was administrated into the ST36 or non-acupoint, at a dose of 1 mg/kg or 2 mg/kg. Opioid receptor or adrenergic receptor agonist and antagonist were injected 20 min before the BVA treatment.

Results. Inflammatory pain induced by CIOA reached its maximum value after 4 weeks. The ST36 BVA treatment showed significant analgesic effect than the non-acupoint BVA. Pain-related behavior was more effectively improved by 1 mg/kg BVA than 2 mg/kg BVA treatment. The analgesic effect of BVA was not synergized by μ -opioid receptor, δ -opioid receptor, κ -opioid receptor, α_1 -adrenergic receptor, α_2 -adrenergic receptor and β -adrenergic receptor agonist pretreatments. The analgesic effect of BVA was not decreased by μ -opioid receptor, κ -opioid receptor, α_1 -adrenergic receptor and β -adrenergic receptor antagonist pretreatments. The analgesic effect of BVA was decreased by δ -opioid receptor and α_2 -adrenergic receptor antagonist pretreatments.

Discussion. The ST36 BVA treatment showed significant analgesic effect than the non-acupoint BVA treatment and the 1 mg/kg BVA treatment showed much more significant analgesic effect than the 2 mg/kg BVA treatment in the rat model of CIOA. The analgesic effect of BVA is mediated by δ -opioid receptor and α_2 -adrenergic receptor.

Conclusions.

The ST36 BVA treatment can relieve the inflammatory pain induced by CIOA through partial involvement of δ -opioid and α_2 -adrenergic receptor. BVA can be a potential candidate for the treatment of inflammatory pain related with OA.

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Choto-san might be effective to cluster headache

Mitsufuji T¹, Sobe H², Mizoi Y¹, Tamura N¹, Araki N¹, Yamamoto T¹

¹*Department of Neurology, School of Medicine, Saitama Medical University, Saitama, Japan.* ²*Department of Oriental Medicine, School of Medicine, Saitama Medical University, Saitama, Japan*

Background. Cluster headache is known to be accompanied by severe pain, even of the primary headache. Triptan formulations and treatment methods such as oxygen inhalation is effective but there is no treatment that was established in oriental medicine. We examined the effectiveness of chouto-san against cluster headache.

Objectives. To examine whether Choto-san is effective to cluster headache or not.

Methods. Untreated cluster headache patients three cases (two cases of male, female 1 cases) to prescribe Choto-san to attack period against, was examined the effect by the frequency of the attack and by the degree of the attack.

Results. In one week after the start of Choto-san a 31-year-old woman example, it was reduced to 10/10 → 5/10 in the degree of headache during peak NRS (Numeric Rating Scale). The 37-year-old male patient headache has disappeared in four days after the start of Choto-san. The 47-year-old man frequency of headache is reduced to once every two days, was improved to pain in NRS 0/10 → 6/10 peak.

Discussion. Cluster headache is known that the production of NO is increased before the attack. It is said that Choto-San inhibit the production of NO. This mechanism is the Choto-san has brought an effect on cluster headache.

Conclusions. Cluster headache is known that the production of NO is increased before the attack. It is said that Choto-san inhibit the production of NO. This mechanism is the Choto-san has brought an effect on cluster headache.

References. Zutsuu kennkyukai shi (In Japanese)

Kojiro Yamaguchi^{1,2}, Takuro Sonoda², Akinori Morinaga², Marie Amitani², Toshimichi Oki², Akio Inui², Tsuyoshi Sugiura¹

¹*Department of Oral and Maxillofacial Surgery, Kagoshima University Hospital,*

8-35-1 Sakuragaoka, Kagoshima, 890-8544 Japan

²*Kampo medical center, Kagoshima University Hospital, 8-35-1 Sakuragaoka, Kagoshima, 890-8544 Japan*

Background. Atypical facial pain and atypical dental pain are the generic term for chronic persistent pain in the oral cavity, jaw, face and/or teeth of which the organic or other cause is unidentified but is related to somatoform disorder and psychological factors. The pain is inconsistent with nerve tract.

Objectives. The aim of this study is that evaluated retrospective 18 cases of the atypical facial pain and atypical dental pain which treated with Kampo medicines and detected the effective therapy with Kampo medicines.

Methods. Eighteen patients (4 males, 14 females, average age: 55.67 years old) of atypical facial pain and/or atypical dental pain had treated with kampo medicines such as Kamishoyosan (KSS), Hochuekkito (HET), Tokishakuyakusan (TSS), Rikkousan (RKS), Kikyoto (KKT), Saikokaryukotuboreito (SRB) and Rikkunsito (RKT) at Kagoshima University Hospital from September 2002 to August 2015. Also, we used a psychological test as an adjuvant diagnosis. Cornell Medical Index (CMI) was performed 15 patients. The therapeutic effect was evaluated pain score such as Visual analogue scale (VAS). The VAS improvement rate (VIR) was classified in three stages (Complete Response (CR): VIR > 90%, Partial Response (PR): 70 < VIR < 90%, No Response (NR): VIR < 70%). The Kampo medicines which we used for treatment were KSS (5), HET (3), HET+TSS (5), RKS (3), SRB (2), KKT (2), RKT (1).

Results. Pain improvement with more PR was found in 77.8% (CR: 8 cases, PR 7 cases) by Kampo therapy. Eight cases of CR Kampo medicines were SRB 100%(2/2), HET 66.7%(2/3), HET + TSS 60%(3/5), RKS 33.3%(1/3), KSS 20%(1/5). Seven cases of PR kampo medicines were KSS 80% (4/5), HET+TSS 40% (2/5), HET 33.3% (1/3). In the 15 cases of CMI, CR patients are Category I 2/4 (50%), Category II 1/3 (33.3%), Category III 4/7 (57.1%), PR patients are Category I 0/4, Category II 1/3 (33.3%), Category III 3/7 (42.9%).

Discussion. The clinical condition of the atypical facial pain and atypical dental pain are so complicated, and the effective therapy is not established. The kampo medicines which had a complete response were the prescription which served to be going, and SRB in particular and HET (including the accompaniment of samisens of the TSS) were effective. SRB is effective in a mental depression tendency, and the HET is useful for vital energy deficiency. Also, atypical facial pain and atypical dental pain were associated with balance abnormality of vital energy, blood, fluid by empty proof from intermediate proof than the TSS balancing with blood, fluid, and these improvement were thought to be one of the effective treatment strategy.

Conclusions. We evaluated 18 cases of atypical facial pain and/or atypical dental pain treated with Kampo medicines. Fifteen case (77.8%) were improved VAS score more than PR level. SRB, HET, and HET + TSS are so effective Kampo medicines in our study.

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Makoto Arai, Yoshinobu Nakada

Department of Kampo Medicine, Tokai University School of Medicine, 143

Shimokasuya, Isehara, Kanagawa, 259-1193, Japan

Background. Kampo medicine has the diagnostic and therapeutic systems that are quite different from those of western medicine. Therefore it is difficult for the medical and pharmacy students who study western medicine to learn the traditional method to decide more suitable Kampo prescriptions for patients.

Objectives. The aim of this study is to develop effective teaching method for Kampo medicine.

Methods. A total of 24 students who attended their fourth-year program at Department of Pharmaceutical Sciences, Tohoku University were selected for this study. The students were allocated to six small groups (4 students per group). The students examined stand-in patients and identified some Kampo medical problems with a focus on the patient's chief complaints. The students proposed three or four possible prescriptions and referred to textbooks to verify the correspondence between the identified medical problems and indications for a Kampo formulation. Finally they chose the most suitable formulation.

Results. Even pharmacy students with no clinical experience could prescribe almost the same formulations that Kampo medicine experts generally choose and give reasons for their choices.

Discussion. Sho-based-therapy requires practitioners to have 1) Clinical abilities to grasp the patients' Kampo conditions; 2) Fundamental knowledge about indications for Kampo prescriptions; and 3) Clinical experience to choose the appropriate Kampo prescription. All of the students learned how to make problem lists to identify Kampo conditions in this study. No faculty member had ever used this method for teaching traditional medicine. The merits of this method are as follows; 1) Students can logically choose the appropriate Kampo prescriptions because the process of identifying Kampo medical problems uses the same process of clinical (diagnostic) reasoning as used in western medicine. 2) The choice of prescription is clear. 3) Analysis of the patient's Kampo conditions is easy and obvious. 4) Students are able to learn the fundamental principles used by Kampo medicine practitioners to treat patients with the simplest possible prescriptions.

Conclusions. The Kampo method of using problem lists is helpful for teaching sho-based therapy to students who intend to become western medicine doctors or pharmacists.

Postgraduate education in Japanese acupuncture: A current survey of medical residents

Yoshinobu Nakada¹, Masanori Takashi² and Makoto Arai¹

¹*Department of Kampo Medicine, Tokai University School of Medicine, 143 Shimokasuya, Isehara, Kanagawa 2591193 JAPAN*

²*Office of Acupuncture and Moxibustion, Tokai University Oiso Hospital, 21-1 Gakkyo, Oiso-machi, Naka-gun, Kanagawa 2590198 JAPAN*

Background. No precise survey has been conducted to assess postgraduate Japanese acupuncture education.

Objectives. We conducted a postal questionnaire survey of 93 residents from Tokai University to identify the problems associated with establishing postgraduate Japanese acupuncture education programs.

Methods. The survey was carried out three times: before beginning and after completing the education program at the University and after completing a two-year internship. We present here the data collected after the internship primarily and compare the consciousness of respondents at the end of acupuncture lectures with the end of two-year internship.

Results. There were 72 effective responses (77%). Forty-seven percent of the residents were interested in Japanese acupuncture and 60%, 63%, and 60% of them thought it was worth learning, necessary, and effective, respectively. These results were decreased from more than 90% level recorded at the end of the acupuncture lecture ($P<0.001$ in all four comparisons). Although 47% and 32% of them wanted to learn acupuncture and expected it to be incorporated in their internship training program, few (4%) were given the opportunity to learn it after graduation. Finally, just after completing their acupuncture education at the University, 23% said they would prescribe acupuncture, but after completing their two-year internship, this proportion decreased to 10% ($P<0.001$).

Discussion. Our survey revealed that 63% of the residents still recognized the need for Japanese acupuncture and 47% of them were motivated to learn it even after the internship. Regrettably, however, these values were decreased considerably from the value recorded just after the education. The supposed reason is that they scarcely have opportunity to be regularly educated in the training hospitals even after graduation from our University in which there is an established Japanese acupuncture education program. In this report, the importance of establishing a post-graduate education system in Japanese acupuncture was clearly demonstrated.

Conclusions. Teaching Japanese acupuncture during the internship period is recommended to ensure that clinicians develop clinical knowledge and a wide range of skills, and remain motivated.

Tongue image analysis for Kampo traditional pattern diagnosis – the association between tongue image and fluid disturbance pattern

Ryutaro Arita¹, Tetsuhiro Yoshino¹, Yuko Horiba¹, Noriyuki Okisu², Yuji Hobo², Haruyuki Toda², Kenji Watanabe¹

¹ Center for Kampo Medicine, Keio University School of Medicine, 35 Shinanomachi Shinjuku-ku Tokyo, Japan

² Konica Minolta, inc., 1 Sakura-machi, Hino-shi Tokyo, Japan

Background. Tongue inspection is one of the important examinations in traditional Japanese medicine (Kampo medicine). Some researchers have shown the correlation of tongue image with certain diseases. However, the association between the tongue image and Kampo traditional pattern diagnosis is unclear.

Objectives. To examine the association between the tongue image and Kampo traditional pattern diagnosis.

Methods. Patients who made their first visits to the Kampo Clinic at Keio University Hospital between April 2015 and August 2015 were included in this study. We took photographs of their tongues using commercially available digital camera in a general examination room environment. Tongue color was measured by RGB color space and L*a*b representation of the CIE 1976 color space at three points: posterior, middle, and apex. Kampo traditional pattern diagnoses were made by experts' examination: qi deficiency, qi stagnation, qi counter flow, blood deficiency, blood stasis, and fluid disturbance. The parameters were compared by Wilcoxon rank sum test. It was not carried out the multiple comparisons correction.

Results. One hundred and fifty-four patients were included in this study. Fourteen patients were excluded because the brightness of their photographs (L*) were too high. The degree of tongue brightness (L*) and color scores (R, G, and B) in the apex area were significantly higher in the fluid disturbance pattern group (n = 21) than in the non-fluid disturbance pattern group (n = 119) (L*, R, G, and B, p < 0.05). There was no significant difference in the other areas, and also in the other diagnoses.

Discussion. In the fluid disturbance pattern group, the brightness of the tongue apex was higher, suggesting that their moister tongues reflected the flash light more. The higher scores of R, G, and B in the fluid disturbance group would be the same meaning as L*, because there were strong correlations with R, G, B, and L*, respectively.

Conclusions. The tongue brightness and color of the apex area is associated with the fluid disturbance pattern. The tongue image analysis may be helpful in Kampo traditional pattern diagnosis.

P-233**Association between teeth-marked tongue and central aortic blood pressure among community-dwelling Japanese men and women: The Toon Health study**

Kiyohide Tomooka¹, Isao Saito², Koutatsu Maruyama¹, Eri Eguchi³, Takeshi Tanigawa¹

¹ *Department of Public Health Juntendo University Graduate School of Medicine, Tokyo, Japan*

² *Department of Community Health Systems Nursing, Ehime University Graduate School of Medicine, Toon, Japan*

³ *Department of Public Health, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama Japan*

Background. Several clinical studies showed the association between teeth-marked tongue and hypertension. However, no studies have examined the association, in particular central aortic systolic blood pressure (cSBP) and augmentation index (AI), which are highly potential indicators for future onset of cerebro-cardiovascular disease, among general population.

Objectives. To examine the associations of teeth-marked tongue with cSBP and AI among community-dwelling Japanese.

Methods. Study participants were 1,253 Japanese men and women aged 30-79 years who participated in the Toon Health Study, which is a prospective cohort study to characterize risk factors for cardiovascular disease prevention in a community setting, from 2011 to 2014. Teeth-marked tongue was assessed by a national licensed acupuncturist, by using tongue images. We measured cSBP and AI non-invasively by pulse waveforms of the radial artery using an automated applanation tonometric system. Multivariable logistic regression analysis was performed to examine the associations of teeth-marked tongue with cSBP and AI.

Results. The proportion of teeth-marked tongue was 16.4%. The multivariable odds ratios (95% confidence interval) of teeth-marked tongue for the highest quartile of cSBP and AI was 2.31 (1.35-3.96; *P* for trend <0.01) and 1.40 (0.88-2.21; *P* for trend =0.12), respectively, compared with the lowest quartile.

Discussion. We found a significant association of teeth-marked tongue with increased cSBP, but found no-association with AI. The increased cSBP might be one of the mechanisms of teeth-marked tongue.

Conclusions. Our present finding suggests that teeth-marked tongue is associated with increased cSBP. Further studies are needed to identify whether teeth-marked tongue is useful for prediction of hypertension.

P-234**Characteristics of traditional Chinese medicine use for the elderly patients in Taiwan: A nationwide population-based study**

Yuan-Ching Liao, M.D.¹, Tzu-Ping Huang, M.D., M.Sc.¹, Tung-Ti Chang, M.D., Ph.D.¹, Mao-Feng Sun, M.D., Ph.D.^{1,2}, Hung-Rong Yen, M.D., Ph.D.^{1,2}

¹*Research Center for Traditional Chinese Medicine, Department of Medical Research, and Department of Chinese Medicine, China Medical University Hospital, Taichung, Taiwan*

²*Research Center for Chinese Medicine & Acupuncture, and School of Chinese Medicine China Medical University, Taichung, Taiwan*

Background. Epidemiological investigations about traditional Chinese medicine (TCM) utilization among elders in Taiwan have not been fully investigated.

Objectives. To characterize the pattern of traditional Chinese medicine (TCM) services in the elderly in Taiwan.

Methods. A random sample of one million insured patients based on National Health Insurance Research Database (NHIRD) claims data from January 1, 2010 to December 31, 2010 was selected. The elderly patients aged ≥ 65 -year-old were categorized as TCM and non-TCM users based on their utilization of TCM clinical visits.

Results. Overall, more than one-fourth people aged 65 and older used at least one TCM in 2010. Most of the elderly TCM users were female. Those from 71 to 80 years old had the highest TCM utilization rate. This frequency of TCM use declined among the elderly over 80. Herbal remedies (48.1%) were the most commonly used therapeutic approach, followed by acupuncture (37.8%) and manipulative therapies (9.3%). Most of the elderly received TCM services in local clinics (87.2%) rather than in hospitals. Northern and central Taiwan had significantly higher utilization rate than other areas. Diseases of the musculoskeletal system and connective tissue (31.59%) were the main complaints to visit TCM clinics. A further comparison of the prevalence rates between TCM and non-TCM visits indicated that fractures and osteoporosis were the major diseases that the elderly tended to visit TCM clinics in Taiwan.

Discussion. This is the first national-wide and population-based data and is highly representative of the elderly's' medical behaviors in Taiwan.

Conclusions. The study presents the prevalence and usage patterns of TCM by the elderly patients in Taiwan. The findings of this study should be useful for health-policy makers as well as practitioners concerning the healthcare for the elderly.

P-235 A systematic review of complementary and alternative medicine prevalence studies in Japan

Yoshihiro Kaneko¹, Koki Tsuruoka², Keiko Yukawa³, Kiichiro Tsutani⁴

¹*Akita University Graduate School of Medicine, Akita, Japan*

²*Japan College of Social Work, Graduate School of Social Service Management, Kiyose, Japan*

³*National Institute of Public Health, Wako, Japan*

⁴*Tokyo Ariake University of Medical and Health Sciences, Tokyo, Japan*

Background. Overall picture of prevalence studies of complementary and alternative medicine (CAM) use in Japan is unclear. The report on CAM prevalence in the European Union (EU) indicated that there are many issues to be discussed (Eardly, 2012).

Objectives. To conduct systematic review, assess the quality of the CAM prevalence studies, and estimate its prevalence in Japan

Methods. We searched PubMed (from 1948 to August 2015) and Ichushi Web (from 1977 to August 2015) for studies of CAM use in Japan. Additional reports were identified by hand search. We included population- based, cohort or cross-sectional studies of people at all ages, reporting the prevalence of CAM in general. We excluded redundant publications and studies focusing on one or a few specific CAM therapies and on specific populations such as disease patients or athletes. The data on CAM prevalence and survey characteristics were extracted from all included studies.

Results. Ten reports published from 1988 to 2015 were included. Research methods, selections of research target areas, and sampling methods varied. The number of respondents ranged from 140 to 6,405; response rate 28.6% to 97.4%; and number of reported CAM categories 6 to 27. The period of use also varied from one month, six months, one year, to no use or reply. Prevalence of any CAM use was obtained from six reports and ranged from 51.0% to 76.0%.

Discussion. The reporting methods were not uniform and the appropriateness of compiling the use rate results is considered to be low.

Conclusions. We propose the use of clear definitions and categories of CAM so that prevalence estimates can be internationally comparable, and the use of a research method based on individual CAM use patterns and characteristics.

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New evidence based on TCM-ADR platform

Ting-Syuan Wang¹, Hsueh-Ting Chu², Hen-Hong Chang³

¹*Asia University, Department of Photonics and Communication Engineering, No.500, Liufeng Rd., Wufeng Dist., Taichung 41354, Taiwan (R.O.C.)*

²*Asia University, Department of Computer Science and Information Engineering, No.500, Liufeng Rd., Wufeng Dist., Taichung 41354, Taiwan (R.O.C.)*

³*School of Chinese Medicine, and Research Center for Chinese Medicine & Acupuncture, No.91, Shueshih Rd., Taichung 40402, Taiwan (R.O.C.)*

Background. In the realm of adverse drug reaction(ADR) for traditional Chinese medicine(TCM), we already have had fifteen years' experience. These small data becomes big data today because of the contribution from the predecessors in TCM-ADR platform group. We use several tools to analyze the drug which happened in highest frequency. Moreover, we tried to compare the difference in the drug which is based on our database and found out the new evidence.

Objectives. To analyze the data of TCM-ADR which is occurring frequently and find some relationships between the same adverse drugs.

Methods. We use the platform which was built by our group to collect data from the publics, manufacturers and health staffs. Besides, we provide the news about ADR as the feedback of filling the reporting forms. After we collected the data, we rearranged the identical drugs together and compared with each other. Except for the simple comparison, we also use correlation analysis to analyze similarity of same drugs and use simple regression analysis to figure out the relationship in bivariate data.

Results. In this study, the most frequent drug is Danzhi Xiaoyao Powder. In these cases, we tried to analyze adverse description of this drug. We found out this ADR is easily appeared in the women in the age of forty to forty-nine. In addition, the most frequent adverse reaction is cough, and digestive system problems is the second one. Not only that, we tried to analyze other data and found out the other variables are almost identical. It shows many people who have some specific constitution will cause same adverse drug reaction if they eat it.

Discussion. Our platform should extend more patient information in reporting process. In this way, it can be more determined that some drugs could cause some ADR. Moreover, it could be a major advance in adverse reactions, because doctors can know how to avoid prescribing specific drugs to specific people and effectively prevent occurrence of adverse reactions.

Conclusions. Our system is a promising tool, could be extended to collect data from the world, and make more perfect profile in ADR.

P-237 A perspective of traditional medicine on correlation between long-term temporomandibular disorders and overall quality of life

Tae-Yoon Kim, Joon-Shik Shin, Jinho Lee; Me-riong Kim, In-Hyuk Ha, Chang Han, Jong-Hoon Park, Hwan-soo Joo, Min-Soo Lee

Jaseng Hospital of Korean Medicine. 635 Shinsa-dong, Gangnam-gu, Seoul 135-896. Republic of Korea.

Background. Chronic temporomandibular disease is widely regarded to have strong associations with psychological factors amongst long-term pain disorders. While these chronic orofacial disorders are known to affect overall quality of life, not many broad-scale studies have investigated the effect on quality of life by various factors.

Objectives. This study is aimed to suggest not only an association between chronic temporomandibular disease and general quality of life but also a perspective of Traditional Korean Medicine on following results.

Methods. This cross-sectional study evaluated the data of 17,198 entries aged ≥ 19 years who replied items on chronic temporomandibular diseases and EQ-5D in the 4th Korean National Health and Nutrition Examination Survey (2007-2009).

We revised for covariates in multinomial logistic regression analysis for multiple sampling design to evaluate the correlation between smoking status and arthritis, and calculated odds ratios (ORs) and 95% confidence intervals (CIs). Backward removal method was used for revisal of significant covariates.

Results. Prevalence of long-term temporomandibular disease was 1.6% (men 1.3%, women 1.8%), and continued to negatively impact overall quality of life even after evaluation for confounding factors. Low sociodemographic variables, and health behavior also had a negative influence on quality of life in general. Long-term temporomandibular inflammation had greatest effect on somatic health and psychological health conditions in quality of life. Quality of life in female was affected to a greater degree than men by temporomandibular disease. While women were more affected by arthritis and general mental health (stress, symptoms of depression, and thoughts of suicide), male were most affected by the condition of hirement.

Discussion. Various symptoms of chronic temporomandibular diseases can be caused by traumatic and structural problems but widely affected by psychosocial environment and internal physical conditions. Statistical results also implies that multi-factorial approach should be considered when treating long-term temporomandibular disorder. The comprehensive aspect of Traditional Korean Medicine and its treating methods surely can be helpful for care of chronic temporomandibular disorders.

Conclusion. These results suggest that control of chronic diseases and psychosocial factors are crucial in prevention and care of long-term temporomandibular disease. Also within the framework of organic standpoint, there may be various ways of controlling this kind of disorder with Traditional Korean Medicine.

P-238**Relation between the five viscera "depression" or "anger"**

TAKASHI Masanori¹, WATSUJI Tadashi²

¹*Office of Acupuncture and Moxibustion, Tokai University Oiso Hospital*

²*Department of Basic Acupuncture and Moxibustion, Meiji University of Integrated Medicine*

Background and Objectives. Patients express various symptoms that reflect their physical, mental and psychological conditions. Thus, traditional Chinese medicine (TCM) emphasizes the relationship between physical and mental states. In the clinical practice of acupuncture and moxibustion, however, many patients chiefly cite physical complaints, and are often treated without a full discussion of their mental and psychological conditions. In TCM, feelings are divided into five categories: anger, happiness, concern, sadness, and fear. The relationship between these feelings and symptoms of disease of the five viscera is not clearly defined, so we attempted to clarify the correlations. This report describes the results of a survey on the traits and nature of anger and depression in terms of the five viscera.

Methods. After obtaining informed consent, 289 students from a vocational school and our university (164 men and 125 women, average age 25 ± 8) were recruited for this study. Three survey sheets were used: Oriental Medicine Health Questionnaire 57 (OHQ57) for understanding the condition of the five viscera; 24 of the 34 items of the State-Trait Anger-expression Inventory (STAXI) for understanding the Trait Anger; and Beck Depression Inventory (BDI) for assessing depression. The survey was conducted from 2011 to 2014.

Results. The average scores in OHQ57 were 5.3 ± 3.2 for liver (*kan*), 4.9 ± 3.4 for heart (*shin*), 5.2 ± 3.2 for spleen (*hi*), 4.1 ± 3.2 for lung (*hai*), and 4.2 ± 3.0 for kidney (*jin*). The average scores in STAXI were 22.4 ± 5.6 for Trait Anger, 19.0 ± 4.4 for anger-expression, 20.9 ± 4.2 for anger-suppression, and 19.1 ± 3.6 for Anger-Control. The average score in BDI was 11.6 ± 7.2 . Significant correlations were found between State of Anger and liver: anger-expression and liver in STAXI, and between depression and liver/heart/ lung in BDI.

Discussion and Conclusions. The Suwen ("Basic Questions," the oldest Chinese medical text) and other TCM literatures report that anger and depression are related to liver, and the results of this study confirmed the relationship between anger and liver. Based on factor analyses, scores of Trait Anger (intensity of anger) revealed that groups suspected of having diseases of liver tended to get angry easily and anger-expression (expression of anger) showed that these groups displayed both aggressive behavior and verbal assertion. On the other hand, latent factors of depression, possibly caused by diseases of liver, were not revealed in factor analyses, although depression was significantly correlated with heart and spleen.

Pro-bone and Anti-fat Effect of Arginine by the Regulation of Wnt/b-catenin Signaling pathway in Human Bone Marrow Mesenchymal Stem Cells

Seunghoon Lee¹, Jun-young Choi², Jeong-Eun Huh³, Daehyun Jo¹, Dongwoo Nam^{1,2}, Jae-dong Lee^{1,2}

¹Department of Acupuncture & Moxibustion, Kyung Hee University Korean Medicine Hospital, 23 Kyungheedaero Dongdaemun-gu, Seoul, South Korea. ²Department of Acupuncture & Moxibustion, College of Korean Medicine, Kyung Hee University 23 Kyungheedaero Dongdaemun-gu, Seoul, South Korea. ³East-West Bone & Joint Research Institute, Kyung Hee University, 149, Sangil-dong, Gangdong-gu, Seoul, South Korea.

Background. Arginine, an α -amino acid, has been reported to exert beneficial effects that ameliorate health problems and prevent excessive fat deposition. However, there are currently few reported for reducing adiposity in mammals, the detailed mechanisms of action of arginine remain to be elucidated. **Objectives.** In this study, we investigated the influence of arginine on osteogenesis and adipogenesis in the absence and presence of IL-1 β -treated human bone marrow mesenchymal cells that had been induced to differentiate into osteoblast and adipocytes. Also, the molecular mechanism investigated focused on the osteogenic markers, transcription factors, adipogenic related transcription factors and the Wnt/ β -catenin signaling pathway.

Methods. The Mesenchymal stem cells (MSCs) from human bone marrow was cultured osteogenic medium and adipogenic medium during 14 and 21 days, and arginine, IL-1 β , arginine+IL-1 was inserted to these and compared with control. PPAR, C/EBP β , Fabp4 and Triglyceride was analyzed by qRT-PCR at 3, 7, 14 days and Intracellular lipid accumulation was identified through Oil red O staining. And β -catenin protein expression was analyzed by Western blot.

Results. In osteogenic medium, treatment of arginine increased type I collagen, osteocalcin, ALP. In IL-1 β -treated group, type I α 1 collagen, osteocalcin, alkaline phosphatase, BMP-2, Runx-2, osterix was significantly reduced, but these were increased dose-dependently with treatment of arginine. In adipogenic medium, treatment of arginine reduced PPAR γ , CEBP- β , Fabp4 in hMSCs compared with these in Control group. In IL-1 β -treated group, PPAR γ , CEBP- β , Fabp4, TG was significantly increased, but these are decreased dose-dependently with treatment of arginine. β -catenin and Wnt-3 α was increased with treatment of IL-1 β and arginine.

Discussion. We suggest that the regulation of canonical Wnt3 α / β -catenin signaling by arginine involved in Runx2 and osterix expression on osteogenic differentiation, and PPAR expression on adipocyte differentiation. Furthermore, our results support previous findings in which actions of arginine or amino acid for human health, metabolism and nutrition were reported. **Conclusions.** In conclusion, arginine may provide a possible therapeutic approach for the prevention and treatment of osteoporosis.

P-240 A traditional herbal medication, Maekmoondong-tang, for cough: A systematic review and meta-analysis

Kwan-Il Kim^{1,6}, Seungwon Shin^{2,6}, Nara Lee³, Beom-Joon Lee⁴, Junhee Lee^{2,6*}, Hyangsook Lee^{5*}

¹Department of Clinical Korean Medicine, ²Department of Sasang Consitutional Medicine, ⁴Division of Allergy, Immune and Respiratory System, Department of Internal Medicine, ⁵Acupuncture & Meridian Science Research Centre, College of Korean Medicine, Kyung Hee University, ⁶Korean Medicine Clinical Trial Center, Kyung Hee University Korean Medicine Hospital, 23 Kyungheedaero, Dongdaemun-gu, Seoul 02447, Republic of Korea; ³Graduate School of Public Health, Seoul National University, 1 Gwanak-ro, Gwanak-gu, Seoul 151-742, Republic of Korea. *Corresponding author

Background. Maekmoondong-tang (MMDT, 麥門冬湯) is a traditional herbal medication widely used to improve cough in Korea, Japan, and China. It is composed of six herbs (Ophiopogonis Tuber, Pinelliae Tuber, Glycyrrhizae Radix, Zizyphi Fructus, Ginseng Radix, and Oryzae Semen)

Objectives. This study is aimed to systematically review the relevant randomised controlled trials (RCTs) to determine the effectiveness and safety of MMDT for cough.

Methods. Electronic and hand-☐searching of 7 databases (Cochrane Library, MEDLINE, EMBASE, OASIS, RISS, CNKI and CiNii) was systematically conducted up to February 2015 for RCTs testing MMDT in patients with cough. The primary outcome was cough symptom improvement using cough diary, visual analog scale, or response rate. Risk of bias of the included trials was evaluated with the Cochrane risk of bias assessment tool. The dichotomous data were pooled to obtain a risk ratio (RR) of cough persisting after treatment, with 95% confidence intervals (CI).

Results. Nine RCTs involving 2453 participants were included. The methodological quality was largely poor for a majority of the studies. MMDT reduced the severity of cough by 74 % compared with the conventional antitussive medications in various conditions (n=1145; RR of cough persisting after treatment=0.26; 95% CI, 0.19-0.34, I²=0%). The addition of MMDT to conventional medication in patients with postinfectious cough significantly alleviated symptoms up to day 5 but the effect was not maintained one week afterwards. For other diseases/conditions including chronic obstructive pulmonary disease, lung cancer surgery, and asthma, the evidence is inconsistent for MMDT/mMMDT for cough. Adverse events appear to be rare but the reporting was poor.

Conclusions. The current evidence from our systematic review and meta-analysis on MMDT for cough is inconclusive and we propose that rigorously designed, placebo-controlled trials of MMDT should be conducted to establish its place in management of cough.

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Inhibitory effects of Cheongsangbangpoong-tang on both inflammatory acne lesions and facial heat in patients with acne vulgaris: A randomized controlled trial protocol

Kyuseok Kim^{1,2}, Kwan-Il Kim² and Junhee Lee^{2,3*}

¹*Department of Ophthalmology & Otolaryngology & Dermatology,* ³*Department of Sasang Constitutional Medicine, College of Korean Medicine, Kyung Hee University;*
²*Korean Medicine Clinical Trial Center, Kyung Hee University Korean Medicine Hospital; 23 Kyungheedae-ro, Dongdaemun-gu, Seoul 02447, Republic of Korea.*

*Corresponding author

Background. Due to increasing interest from acne patients concerned about the side effects associated with conventional therapies, complementary and alternative medicine (CAM) has been suggested as a new therapeutic modality for acne vulgaris. Herbal medicine is one of these CAM treatments. Cheongsangbangpoong-tang (CBT, 淸上防風湯) is a common herbal formula used in patients with acne vulgaris in the clinical practice of Korean Medicine (KM). However, despite the common use of CBT in clinical practice, the current level of evidence is insufficient to support an inhibitory effect of CBT on inflammatory acne lesions and facial heat.

Objectives. This study was designed to assess the inhibitory effect of CBT on both inflammatory acne lesions and facial heat.

Methods. A randomized, double-blind, parallel-group, and placebo-controlled trial will be conducted. Fifty-six participants with acne vulgaris will be randomized into one of two groups: the CBT or placebo groups. After randomization, participants will be prescribed either CBT or placebo three times a day at a dose of 5 g after meals for 8 weeks. The following outcome measurements will be used in the examination of subjects: the mean percentage change and the count change of the inflammatory and non-inflammatory acne lesions, the temperature of facial points on digital infrared thermal imaging (DITI), serum cortisol, serum dehydroepiandrosterone-sulfate (DHEA-S), visual analogue scale (VAS), investigator global assessment (IGA), and severity score on the Korean Acne Grading System (KAGS) from baseline to the end of the trial.

Discussion & Conclusion This trial will provide evidence regarding the inhibitory effect of CBT on inflammatory acne lesions and facial heat. The findings of this trial may have important implications for the more widespread use of CBT for the treatment of acne vulgaris.

Trial registration. The trial is registered with the Clinical Research Information Service (CRiS), Republic of Korea: KCT0001468.

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P-242 Protective effect of Yeoldahanso-tang on radiation-induced oral mucositis in mice

Kwang Seok Ahn¹, Seok-Geun Lee¹, Young-Gyu Eun², Moonkyoo Kong³, Jung-woo Lee⁴, Junhee Lee⁵

¹Department of Science in Korean Medicine, College of Korean Medicine, Kyung Hee University, 24 Kyungheedaero-ro, Dongdaemungu, Seoul 130-701; ²Department of Otolaryngology-Head and Neck surgery, Kyung Hee University Medical Center, Kyung Hee University School of Medicine; ³Department of Radiation Oncology, Kyung Hee University Medical Center, Kyung Hee University School of Medicine; ⁴Department of Oral & Maxillofacial Surgery, Kyung Hee University Dental Hospital, Kyung Hee University School of Dentistry; ⁵Department of Sasang Constitutional Medicine, College of Korean Medicine, Kyung Hee University, 23 Kyungheedaero-ro, Dongdaemun-Gu, Seoul 130-872, Republic of Korea

Background. Radiation-induced oral mucositis is probably the most common toxicity for head and neck cancer patients. This adverse effect potentially leads to various lesions such as erythema, ulcerations, pain, opportunistic infections, and weight loss.

Objectives. Although there are many experimental studies and clinical trials related to novel therapies for radiation-induced oral mucositis, we here evaluate the protective effect of orally administrated Yeoldahanso-tang (YDHS) on radiation-induced oral mucosal damage in a mouse model.

Methods. YDHS is a traditional Korean herbal formula, containing 7 herbs: *Pueraria thunbergiana* Benth., *Angelica tenuissima* Nakai, *Platycodon grandiflorum* (Jacq.) A. DC., *Raphanus sativus* var. *Angelica dahurica* Benth. et Hooker f., *Cimicifuga heracleifolia* Kom., and *Scutellaria baicalensis* Georgi.

Results. Oral mucosal damage was induced by irradiation (17 Gy) throughout the head and neck area in male BALB/c mice. YDHS (400 or 800 mg/kg/day for consecutive 12 days) was administered orally, and the protective effect was determined by histological evaluation of the oral mucosa. We found that irradiation highly increased COX-2 expression in salivary glands and its expression was suppressed by YDHS. Histologically, the irradiated mice exhibited the epithelial thickness from the basement membrane to the stratum granulosum significantly decreased as compared to the vehicle group. YDHS-treated mice showed significantly recovered epithelial cell layer thickness compared to irradiated group. Similarly, YDHS-treated group also showed the expression of Ki-67, cell proliferation maker, in the basal layer compared to the irradiated group in both dorsal and ventral surface.

Discussion. The treatment of YDHS on oral mucositis induced by RT can protect mucosal damages through the preservation or reconstruction of normal epithelium. Thus, YDHS may be a promising herbal formula for the prevention and treatment of radiation-induced oral mucositis during cancer therapy and cancer pain relief.

Conclusions. From these results, we suggest that YDHS is a promising candidate for preventing or treating radiation-induced oral mucositis during radiation therapy.

P-243 Electro-acupuncture to treat gastroesophageal reflux disease: A study protocol for a randomized, patient and assessor-blinded, sham-controlled trial

Gajin Han^{1,2}, Jungtae Leem³, Hojung Lee³, Junhee Lee^{1,4*}

¹Korean Medicine Clinical Trial Center, Kyung Hee University Korean Medicine Hospital, 23 Kyungheedaero; ²Department of Gastroenterology, ³Department of Clinical Research of Korean Medicine, ⁴Department of Sasang Constitutional Medicine, College of Korean Medicine, Kyung Hee University, 26 Kyungheedaero, Dongdaemun-gu, Seoul, 02447, Republic of Korea. *Corresponding author

Background. Gastroesophageal reflux disease (GERD) lowers quality of life and increases medical costs. Electro-acupuncture (EA) has been used to ease symptoms and improve gastrointestinal motility in patients with GERD.

Objectives. The main purposes of this study are to evaluate the efficacy and safety of this procedure

Methods. This is a protocol for a randomized, patient and assessor-blinded, sham-controlled trial. Sixty participants with symptoms of GERD, who have formerly undergone standard treatment, will be recruited from August 2015 at Kyung Hee University Korean Medicine hospital. The participants will be allocated to either the EA (n = 30) or sham EA group (n = 30); the allocation will be concealed from the both the participants and the assessors. The EA group will undergo penetrating acupuncture at 18 fixed points and 2 optional points chosen using the pattern identification for gastroesophageal reflux disease. Electrical stimulation will be applied at some of the acupoints. The sham EA group will undergo non-penetrating acupuncture without electrical stimulation at 18 non-specific points, each of which will be only 2 cm away from the true acupoints used in the EA group. In both groups, the procedure will be performed using the Park device. The treatment will last for 6 weeks (with 2 weekly sessions) and outcome will be evaluated at baseline, 3 weeks, and 6 weeks. The primary outcome will be the proportion of responders with adequate symptom relief, while the secondary outcomes will comprise the results of the Nepean dyspepsia index, the Korean Gastrointestinal Symptom Rating Scale, the EQ-5D™, levels of gastrin, motilin, and inflammatory cytokines, the Perceived Stress Scale, the Qi-stagnation questionnaire, the Patient Global Impression of Change, and the Spleen Qi Deficiency Questionnaire.

Discussion & Conclusion. The results of this trial will provide information about the efficacy and safety of EA in the treatment of GERD symptoms, as well as evidence regarding the use of EA to treat GERD in real clinical practice.

Trial registration. The trial is registered with the Clinical Research Information Service (CRiS), Republic of Korea KCT0001653.

Acknowledgements. This study was supported by a grant from the Traditional Korean Medicine R&D Project, Ministry of Health & Welfare, Republic of Korea. (HI13C0700)

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Efficacy and safety of Myofascial-meridian Release Acupuncture (MMRA) for chronic neck pain: a study protocol for randomized, patient- and assessor-blinded, sham controlled trial

Seunghoon Lee¹, Dongwoo Nam^{2,4}, Jungtae Leem⁴, Gajin Han⁴, Seungmin Lee¹ and Junhee Lee^{3,4*}

¹Dept. of Acupuncture & Moxibustion, Kyung Hee University Korean Medicine Hospital; ²Dept. of Acupuncture & Moxibustion; ³Department of Sasang Constitutional Medicine, College of Korean Medicine, Kyung Hee University, ⁴Korean Medicine Clinical Trial Center, Kyung Hee University Korean Medicine Hospital, 23 Kyungheedaero, Dongdaemun-gu, Seoul 02447, Republic of Korea. *Corresponding author

Background. The purpose of this study is to evaluate the efficacy and safety of myofascial-meridian release acupuncture (MMRA) in the treatment of chronic neck pain compared with sham acupuncture. **Objectives.** The aims of this study are to assess the efficacy and safety of MMRM in treating chronic neck pain for pain intensity, function, autonomic and psychometric measurements, quality of life, global assessment, biomarkers and adverse events compared with sham acupuncture.

Methods. A protocol for a randomized, patient- and assessor-blinded, sham controlled parallel trial is presented. Seventy-four participants with a ≥ 3 month history of neck pain and a score of ≥ 4 on the 11-point pain intensity numerical rating scale (PI-NRS) will be randomly assigned to the MMRA group ($n = 37$) or sham acupuncture group ($n = 37$). The participants will receive the MMRA treatment or sham acupuncture treatment twice per week for 4 weeks. The primary outcome is the mean change in the PI-NRS (0 = no pain and 10 = worst possible pain, 11-point Likert scale) from baseline to 4 weeks. The secondary outcomes are the mean change from baseline on the clinical relevance of the pain (ratio of changes greater than 1.5 or with percentiles greater than 30 % and 50 % in the PI-NRS), function (Neck Disability Index and Cervical Range of Motion), autonomic and psychometric measurements (Heart Rate Variability and Perceived Stress Scale), quality of life (EuroQol), global assessment (Patient Global Impression of Change), semi-objective outcomes (pressure pain threshold, consumption of rescue medicine and days of restricted activity) and immunologic/stress biomarkers.

Adverse events will be evaluated at every visit.

Discussion & Conclusion. The results of this trial will provide evidence to confirm the efficacy and safety of acupuncture for chronic neck pain.

Trial registration. The trial is registered with the Clinical Research Information Service (CRiS), Republic of Korea: KCT0001573.

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Background.

Pattern Identification (PI) is a diagnosis of the pattern or syndrome, through comprehensive analysis of symptoms and signs, which has implications for determining the cause, nature and location of the illness and the patient's physical condition, and their treatment. Many questionnaires for PI diagnosis have been developed in Korean Medicine

Objectives.

The aim of this study was to suggest a standard process in developing PI questionnaire.

Methods.

Through systematic review of developed PI questionnaire, we arranged the process of past PI questionnaire. The expert review board composed of clinician, researcher, and statistician, examined thoroughly and made a 1st version of process in developing questionnaire of PI. After several meeting and discussion, the review board re-organized 2nd version and confirmed it.

Results.

The review board suggested 11 steps in developing PI questionnaire and revealed the some important points in each step (Figure 1). They also put emphasis on test-retest method and inter-item consistency method in reliability test and content, nomological, and discriminant convergent validity in validity test.

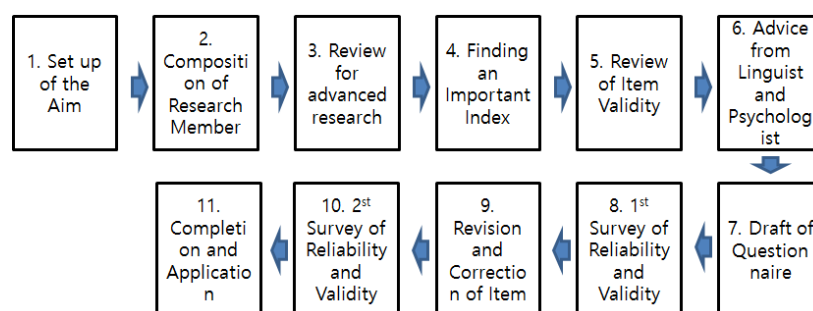


Figure 1. Standard process in developing PI questionnaire

Discussion.

The suggested 11 steps and several points to be considered in each step could contribute PI questionnaire to be more objective and quantitative.

Conclusions.

This study suggests a standard process in developing PI questionnaire.

Acknowledgement. This study was supported by a grant of the Traditional Korean Medicine R&D Project, Ministry of Health & Welfare, Republic of Korea. (HI15C0006)

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Effect of Acupuncture for Radioactive-Iodine Induced Anorexia in Thyroid Cancer Patients: A Randomized Double Blinded Sham Controlled Pilot Study

Ju-Hyun Jeon¹, Jeungwon Yoon², Chong-Kwan Cho², In-Chul Jung³, Sungchul Kim⁴, Suk-Hoon Lee⁵, Hwa-Seung Yoo²,

¹Dept. Acupuncture & Moxibustion, Daejeon Korean Medicine Hospital, Daejeon University, Korea

²East – West Cancer Center, Dunsan Korean Medicine Hospital, Daejeon University, Korea

³Dept. Psychiatry, Dunsan Korean Medicine Hospital, Daejeon University, Korea

⁴Dept. Acupuncture & Moxibustion, Gwangju Korean Medicine Hospital, Wonkwang University, Korea

⁵Dept. Statistics, Chungnam National University, Korea

Background. Recently, acupuncture in clinical management of cancer symptoms are showing preliminary positive outcomes, but no attempt has been made yet to study the effect of acupuncture for RAI induced anorexia in thyroid cancer patients.

Objectives. The aim of this study is to evaluate the efficacy and safety of acupuncture for RAI induced anorexia in thyroid cancer patients.

Methods. 14 thyroid cancer patients with RAI induced anorexia were randomized to true and sham acupuncture group. Both groups were given 6 true or sham acupuncture treatments in 2 weeks. Outcome measures included the change of FAACT, VAS, weight, BMI, ACTH and cortisol levels.

Results. The mean FAACT ACS scores of the true and sham acupuncture groups were increased from baseline to exit in ITT and PP analyses; true acupuncture group showed higher increase but with no statistical significance. Between baseline and the last treatment, statistically significant differences were found in ITT analysis of the TOI score (p .034) and in PP analysis of the TOI (p .016), FACT-G (p .045), FAACT (p .037) scores. There was no significant difference in VAS, weight, BMI, ACTH and cortisol level changes between groups.

Discussion. The improvement of RAI-induced anorexia related QOL was mostly through the practical physical changes produced by acupuncture. In the future, a multi-site RCT with larger sample size is recommended.

Conclusions. Although the study is based on a small sample of participants, our findings support the safety and potential use of acupuncture for RAI induced anorexia and quality of life in thyroid cancer.

*This study was supported by a grant of the Traditional Korean Medicine R&D Project, Ministry of Health & Welfare, Republic of Korea. (HI15C0006)

Reliability and Validity Analysis of the Instrument on Pattern Identifications for Depression

In Chul Jung¹, Hun-Soo Lee¹, Wee-Chang Kang²

¹*Dept. of Oriental Neuropsychiatry, College of Korean Medicine, Daejeon University, 62-0 Daehak-ro Dong-gu Daejeon, Korea*

²*Dept. of Statistics, H-Liberal Arts College, Daejeon University, 62-0 Daehak-ro Dong-gu Daejeon, Korea*

Background. We developed a novel tool for pattern identification of depression in order to conduct scientific clinical studies of depression and diagnose objectively pattern identifications of depression in clinical practice of Korean medicine. The evaluation of reliability and validity of the tool is required.

Objectives. This study was performed to evaluate reliability and validity of the instrument on pattern identifications for depression.

Methods. Two assessors carried out evaluation about the instrument on pattern identifications for depression targeting 201 participants who got HAM-D score over 12 or under 7 twice each.

Results. Reliability of inter-assessor was higher than intra-assessor in reliability analysis about classification of pattern identification evaluated by the instrument on pattern identifications for depression. Reliability of intra-assessor and inter-assessor showed between moderate agreement and strong agreement when reliability analysis about classification score of the pattern identification had been performed. Reliability analysis to evaluate validity of the instrument on pattern identifications for depression showed moderate agreement.

Conclusions.. The results were that reliability analysis of the instrument on pattern identifications for depression showed over moderate agreement and validity analysis represented positive correlation.

Acknowledgement.. This research was supported by Basic Science Research Program through the National Research Foundation of Korea(NRF) funded by the Ministry of Education. (2013R1A1A2011690). This study was supported by a grant of the Traditional Korean Medicine R&D Project, Ministry of Health & Welfare, Republic of Korea. (HI13C0493 & HI15C0006)

**The Choice Factors of Korean Medicine in Middle and Old Age Population:
Focusing on Pain Region and Level**

Hye Kyoung Jang¹, Jeong June Choi², In Chul Jung¹, Yang-Chun Park¹

¹ Clinical Trial Center in Daejeon University Dunsan Korean Medicine Hospital,
75 Daedeok-daero 176beongil, Seo-gu, Daejeon, Korea

²*College of Korean Medicine, Daejeon University, Daehak-ro 62, Daejeon, Republic
of Korea*

Background. The growing number of old age population threatens personal economy and national health insurance finance. Pain, most old population complain of, is a chronic symptom closely related to quality of life, therefore, it requires to be controlled and treated systemically.

Objectives. According to increasing the number of the patients treated with Korean medicine for pain therapy, we investigated the factors that affect choice of Korean medicine, multiple frequency pain region, and pain intensity in middle and old ages.

Methods. The data from fourth Korean Longitudinal Study of Ageing (KLSOA) conducted by the Korea Labor Institute in 2012 were analyzed.

Results. The factors choosing Korean medicine in middle and old ages were identified with an order of female, subjective health condition, rheumatic arthritis, consciousness of hierarchy, age, activity limitation, quality of life, and total family income. High frequency pain regions were waist, knee, leg, shoulder, wrist, and hip. The most severe pain regions were ankle, toes, and hip, exclusively, and the other regions were mild.

Discussion. The main choice factors of Korean medicine treatment were subjective factors such as health condition and consciousness of hierarchy as well as gender and ages. Large part of the middle and old population treated with Korean medicine complained low level pains, suggesting the necessity of development a Korean medicinal therapy controlling and attenuating the pains.

Conclusions. Subjective elements were the most important factor to choose Korean medicinal treatment in middle and old ages. Lower body and low level pain were the most frequent pain region and intensity, respectively.

Acknowledgement. This study was supported by grant of the Traditional Korean Medicine R&D Project, Ministry of Health & Welfare, Republic of Korea. (HI15C0006)

Control of Restraint Stress-induced Depressive-like Behaviors and Corticosterone-induced Neuronal Damages by So-ochim-tang-gamibang, a Korean Herbal Medicine

Jung Eun Choi¹, Dae-Myung Park², Jaemin Son¹, Jeong June Choi¹, Seunghyung Kim³, Moonho Do⁴, Sun Yeou Kim⁴, Yang-Chun Park², In Chul Jung², and Mirim Jin¹,

¹*College of Korean Medicine, Daejeon University, Daejeon 34520, Republic of Korea*

²*Dunsan Korean Medicine Hospital of Daejeon University, Daejeon 35235, Republic of Korea*

³*Institute of Traditional Medicine and Bioscience, Daejeon University, Daejeon 34520, Republic of Korea*

⁴*College of Pharmacy, Gachon University, Incheon 21999, Republic of Korea*

Background. So-ochim-tang-gamibang (SOCG) is a Korean herbal medicine formula that has been applied to treat depressive moods and depression associated somatoform pain.

Objectives. The aim of this study is to assess antidepressant-like effects of SOCG and to investigate its possible cellular and molecular mechanisms.

Methods. Mice were exposed to restraint stress 6 h per day over a period of two weeks, and orally administrated either SOCG (30, 100, or 300 mg/kg/day). The depressive-like behaviors were analyzed by forced swimming test and open field test. The levels of corticosterone in serum, and caspase-3 and BDNF in the hippocampus were analyzed. The level of *Bax*, *Bcl-2*, *BDNF*, and caspase-3 in PC-12 cells were analyzed by real-time PCR and western blotting.

Results. Administration of SOCG not only reduced immobility time of restraint-stressed mice in a dose-dependent manner, but also significantly increased the distance mice moved and the number of crossings in the open field test. Further, SOCG significantly reduced the serum level of corticosterone and expression of caspase-3, while increased expression of BDNF *in vivo*. SOCG increased cell viability, which was accompanied by caspase-3 expression and the ratio of *Bax/Bcl-2* mRNA *in vitro*.

Conclusions. Taken together, our data suggested that SOCG may have potential as an antidepressant agent controlling depressive behaviors and corticosterone-induced neuronal damage caused by chronic stress. This study was supported by a grant of the Traditional Korean Medicine R&D Project and the Korean Health Technology R&D Project, Ministry of Health & Welfare, Republic of Korea. (HI15C0006, HI12C1954, and HI13C0493)

P-250**Effects of Shinchubogun-tang on Symptom Reduction in Patients with Intervertebral Lumbar Disc Herniation: A Retrospective Observational Study**

Eun Jung Lee, Eun su Jang, In Chul Jung

College of Korea Medicine, Daejeon University, Korea

Background. Shinchubogun-tang(hereinafter referred to SBT) is Korean medicine which is prescribed for the purpose of improving the symptoms related to lumbar disc herniation in clinical.

Objectives. This study was aimed to assess the effects of SBT on the lumbar disc herniation.

Methods. We analyzed the medical records of 36 patients, who were diagnosed with lumbar disc herniation and prescribed with SBT in addition to Korean medical common treatments at Dunsan Korean Medicine Hospital of Daejeon University from January 1st, 2013 to November 30th, 2015. The effects of SBT was evaluated by comparing before and after taking SBT through 0-10 VAS of the symptoms including lower back pain, radiating pain, and lower extremity numbness.

Results. SBT plus common korean medicine treatment group significantly decreased VAS score of lower back pain from 5.40 ± 1.62 to 3.28 ± 1.70 ($p < 0.01$), radiating pain from 5.60 ± 1.42 to 2.35 ± 1.79 ($p < 0.01$), lower extremity numbness from 5.77 ± 1.52 to 2.55 ± 1.85 ($p < 0.01$).

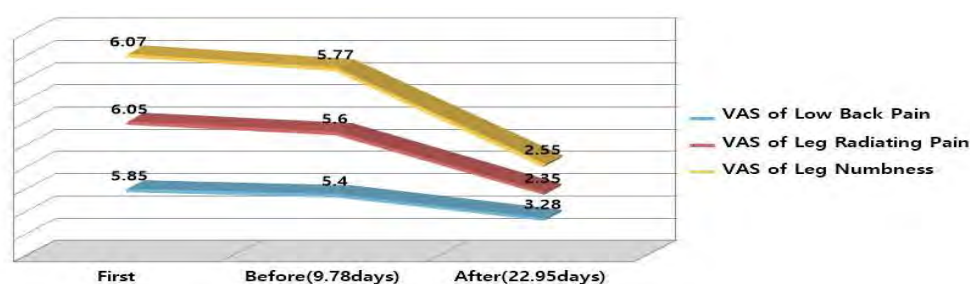


Figure 1. The change of VAS between before and after taking SBT

Discussion. This study showed that effects and limitations of SBT on lumbar disc herniation.

Conclusion. This study demonstrated that SBT might have a potential on improvement of lumbar disc herniation.

Acknowledgements. This study was supported by a grant of the Traditional Korean Medicine R&D Project, Ministry of Health & Welfare, Republic of Korea. (HI15C0006).

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An attempt to evaluate traditional Chinese medicine treatments in the update of Japan Geriatrics Society guidelines

Koh Iwasaki¹, MD, PhD; Shin Takayama², MD, PhD

¹*Center for the Traditional Chinese Medicine and Home Healthcare, Southern Tohoku General Hospital, 2-5, 1, Satonomori, Iwanuma City, Miyagi Prefecture, Japan.* ²*Department of Education and Support for Regional Medicine, Department of Kampo Medicine, Tohoku University Hospital, 1-1, Seiryomachi, Aoba Ward, Sendai City, Miyagi Prefecture, Japan.*

Background. Traditional Chinese Medicine (TCM) grew up and spread all over the world. The voluminous and expanding literature are provided from TCM for elderly patients. The Japan Geriatrics Society (JGS) guidelines contain a chapter for TCM because it is widely used for elderly patients and is sometimes covered by national medical insurance in Japan. In guideline development, recent stream is using Grading of Recommendations Assessment, Development and Evaluation (GRADE) system, that is widely acquired to many organizations and journals including World Health Organization, Cochrane library, and UptoDate.

Objectives. Evaluating TCM for elderly patients in updating JGS guideline according to the modified GRADE system.

Methods. The PubMed and Cochrane databases were searched for studies of TCM in elderly patients published in English or Japanese between 1st Jan 1972 to 22nd Nov 2013, and a systematic review was performed.

Results. Fifty-seven of 503 identified articles were included. Eighteen studies of TCM herbs and recipes showed from high to low Quality of Evidence (QoE) for elderly patients, and five of these with a strong or weak Recommendation Strength (RS) were included to the screening tool to alert doctors to right treatment, as were recipes that involved five herbs to the the screening tool for older person's prescriptions. The RS of 11 TCM recipes with a high to low QoE could not be evaluated because these were not available in Japan. These trials suggested that TCM could improve the symptoms of elderly patients. However, our proposition was approved by only 62.5% of committee members who did not have a conflict of interest, which is below the 80% approval needed in the guideline rules. Then the guideline committee decided to put TCM in an independent chapter, not in the grand list. **Conclusions.** The GRADE system was partially available for the evaluation of traditional medicine, at least with respect to QoE. RS was not suitable in this context, as committee members had very different views and experiences of this issue.

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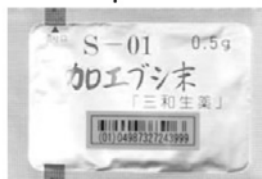
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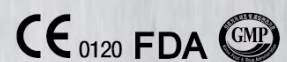
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※当社比

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カフェイン	ゲニポシド酸			
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(2015年2月制作)

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The company was named "KOTARO" by its founder Taro Ueda with reference to his birth place. Close to the ancient city of Nara. Kotaro is the name of an enormous sheer cliff, 700 m wide and about 200 m high. Mr. Ueda felt an affection rising to the heavens for this cliff and thus made it the company's name.

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