

THE JOURNAL OF  
KAMPO, ACUPUNCTURE AND INTEGRATIVE MEDICINE  
Research on Theory, Practice and Integration

**KAIM**

**The Journal of  
Kampo, Acupuncture and Integrative Medicine**

INTERNATIONAL INSTITUTE OF HEALTH AND HUMAN SERVICES,  
BERKELEY

Volume 6, Number 4 · Winter 2011

**Editorial**

The Pharmacopedics in Japan  
**Toshiaki Makino**

**Japanese Acupuncture - Current Research**

Japanese Traditional Medicine Text (2) – Internal Medicine B  
**Tomomi Narushima and Eitaro Noguchi**

**Kampo Medicine - Current Research**

Investigation of Clinical Indications of *Goreisan* in Patients with Epigastralgia in the Summer Season  
– From the “Goreisan Symposium 2010” –  
**Yoko Kimura**

**Clinical Report 1 (Acupuncture)**

The Cases of Acupuncture and Moxibustion Treatment for Pollakisria and Nocturia during Pregnancy Thought to be Effective  
**Naoko Maeda and Shuichi Katai**

**Clinical Report 2 (Kampo Medicine)**

Headache 3  
**Mihoh Koga**

**Front Line of Kampo Pharmacology**

Review of Research Presentations on Kampo Medicine 5  
**Toshiaki Makino**

# LIFENCE®



## *College Logos*

*We believe it is necessary to create a new way of thinking for the total understanding of "Life, Survival, and Health".*

*We decided to coin the word "Lifence" to express this.*

*Lifence means the combination of life science and medicine as well as other disciplines such as health science, psychology, ethics, etc.*

*Our college logos symbolizes the above.*

*The ripple effect represents the ocean and the birth of life.*

*The rainbow colored sphere represents a safe environment and a barrier to protect us from negative influences.*

*The picture by Leonardo da Vinci represents a balanced body and health.*

*Completing our logos is a ring which represents the unity of space fulfilling the total meanings of lifence.*

**GOTO**  
College of Medical Arts & Sciences

The Journal of  
Kampo, Acupuncture and  
Integrative Medicine  
(KAIM)

Research on Theory, Practice and Integration

**EXECUTIVE EDITOR**

Shuji Goto  
Chairman, GOTO College of  
Medical Arts & Sciences  
Tokyo, Japan

**EDITOR-IN-CHIEF**

Donald Lauda, Ph.D.  
Dean Emeritus, College of Health &  
Human Services  
California State University-Long Beach  
CA, U.S.A.

**ASSOCIATE EDITORS**

Shuichi Katai  
Ibaraki-ken, Japan  
Hiromichi Yasui  
Tokyo, Japan

**EDITORIAL STAFF**

Akihiro Souma  
Hiromi Sasaki  
Hiroshi Tsukayama  
Hitoshi Yamashita  
Junko Okubo  
Kazunari Ozaki  
Kengo Nakata  
Masayuki Kashima  
Naoya Ono  
Noboru Mitsuhata  
Sayaka Toda  
Takao Namiki  
Toshiaki Makino  
Toshihiro Togo

**PUBLISHER**

Shuji Goto  
International Institute of Health and  
Human Services, Berkeley  
2550 Shattuck Avenue, Berkeley  
California 94704-2724, U.S.A.

---

The Journal of  
Kampo, Acupuncture and Integrative Medicine

---

Volume 6, Number 4 · Winter 2011

**TABLE OF CONTENTS**

**1 Editorial**

*The Pharmacopedics in Japan*

Toshiaki Makino

**2 Japanese Acupuncture - Current Research**

*Japanese Traditional Medicine Text (2) – Internal Medicine B*

Tomomi Narushima and Eitaro Noguchi

**9 Kampo Medicine - Current Research**

*Investigation of Clinical Indications of Goreisan in Patients with Epigastralgia in the Summer Season – From the “Goreisan Symposium 2010” –*

Yoko Kimura

**15 Clinical Report 1 (Acupuncture)**

*The Cases of Acupuncture and Moxibustion Treatment for Pollakisria and Nocturia during Pregnancy Thought to be Effective*

Naoko Maeda and Shuichi Katai

**19 Clinical Report 2 (Kampo Medicine)**

*Headache 3*

Mihoh Koga

**22 Front Line of Kampo Pharmacology**

*Review of Research Presentations on Kampo Medicine 5*

Toshiaki Makino

**26 Medical History in Japan**

*“Historical Significance of Standardization of Acupoint Locations”, the Second Japanese Acupoint Committee (4)*

Makoto Mayanagi

---

**MISSION**

*To disseminate peer-reviewed information on the use of acupuncture and herbs, and integration with western medicine, based on research from an international perspective; thereby stimulating further research, application of documented therapeutic measures; and facilitating dialogue among health care practitioners worldwide.*

◇小太郎漢方製薬株式会社

漢方 越 上  
の  
人  
に  
大  
太郎

*KOTARO PHARMACEUTICAL introduced in 1957 the world's first Kampo extract preparations on the market. Later, in 1967, six of our preparations could be covered in Japan for the first time by the health insurance and after 1976 more than 100 of our preparations were used in hospitals and clinics. Now it is half a century since we put our Kampo extract preparations on the market and believe, we made a major contribution to this industry. In the future we intend to continue working in accordance with our company motto: "Still better Kampo for still more people" and provide pharmaceutical products of still higher quality.*



### **Origin of the company's name**

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.

**KOTARO PHARMACEUTICAL CO., LTD.**

5-23 Nakatsu 2-Chome, Kita-ku, Osaka 531-0071, JAPAN

URL: <http://www.kotaro.co.jp>

## Editorial

### *The Pharmacopedics in Japan*

In 2006, pharmacy education in Japanese universities was changed into two different curriculums offered in parallel. One is six-year program that was strengthened with the addition of a two-year program allotted to the subjects relating to clinical pharmacy to the conventional four-year program and mainly aimed to develop pharmacists who work in the medical field. Another is the four-year program mainly focused on developing pharmaceutical researchers and engineers. Under the new system, those who wish to take the national examination for pharmacists must graduate from the six-year program. These changes have come to be made in response to growing expectations for the pharmacists to play active roles in healthcare, also as a possible measure for addressing diverse issues facing the future of healthcare in Japan, including the issue of declining birthrate and aging population.

Against this backdrop, there are high expectations for Kampo medicine, or traditional Chinese herbal medicine, within the medical field in Japan. In fact, 90% of physicians in Japan prescribe Kampo as appropriate, and 8% of all prescriptions that are given include Kampo. Thus, Kampo is a requisite part of clinical pharmacy education, and many universities with a pharmacy department have begun to offer classes on Kampo. However, as the most universities do not have faculty members who specialize in Kampo medicine, it was decided that pharmacognosy teachers would teach Kampo, as pharmacognosy relates most closely to Kampo medicine.

In a period when the most pharmaceutical products were not synthetic but crude drugs derived from natural sources, pharmacognosy aimed to eliminate fraudulent and inferior products to assure the quality of pharmaceutical products, and secure their safety and effectiveness. In order to secure the quality of such crude drugs, it was most important to clarify the pharmacologically active chemical ingredients they contain and manage their content to a certain level. Thus, in recent years, pharmacognosy had come to be regarded as a study for isolating chemically pure compounds from crude drugs and developing new drugs. Still more recently, however, as it has become rare to find new compounds contained in crude drugs that are used as ingredients for Kampo, pharmacognosists have shifted their attention to natural resources such as microorganisms and marine organisms that were not conventionally used as crude drugs, and have basically lost interest in Kampo.

The recent changes in pharmacy education are prompting pharmacognosists to return to pharmacognosy in its original sense. As matters stand, Kampo is used in the medical field despite its various issues as a drug, but modern society demands that these issues be addressed through research. Therefore, in response to such demand, it is hoped that Kampo studies will be actively pursued in the future.

**Toshiaki Makino, Ph.D.**

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

## Japanese Acupuncture - Current Research

*Japanese Traditional Medicine Text (2) – Internal Medicine*

Tomomi Narushima<sup>1)</sup>, Eitaro Noguchi<sup>2)</sup>

1) East-West Integrative Medical Center

Tsukuba University of Technology

2) Graduate School of Technical Sciences

Tsukuba University of Technology

---

### B Influences on Digestive Tract Function due to Acupuncture

#### 1. General Overview of Research

Compared to other countries, at an early date Japan started a long history of scientifically researching the effects of acupuncture and moxibustion on the digestive system.

In 1912, Jujiro Kashida et al., studied the effects of moxibustion on intestinal peristalsis in domesticated rabbits using a manometer. Stimulating ST36 (足三里) as well as abdominal points with moxibustion they reported a transient acceleration that gradually became a resistance response to the stimulation<sup>1</sup>. Further, in 1914, Michio Goto observed an acceleratory response to moxibustion stimulation in the intestinal movement of rabbits<sup>2</sup>. Additionally, in 1929, Shuji Fujii et al., reported a resistance response to moxibustion in the small intestinal movement of rabbits<sup>3</sup>. Later, in the 1970's, Sato et al., and Noguchi, who played a leading role as Japanese researchers performed basic research, gradually clarified the mechanism by which acupuncture and moxibustion treatment influences the somato-autonomic nerve reflex thereby influencing the digestive system<sup>4,5</sup>.

Concerning clinical research, in 1992, Li et al., presented Chinese acupuncture and moxibustion research on the subject of the digestive tract. In 1999, at a Symposium sponsored by the Japanese Society of Acupuncture and Moxibustion, a comprehensive review of basic and clinical research outcomes was presented<sup>7</sup>.

Recently in foreign countries, due to increased public need, Irritable Bowel Syndrome (IBS) has frequently

become the subject of research. In response the introduction of clear standards for IBS diagnosis, announced in Rome 2000, the resulting large supply of public funds for acupuncture research for treating IBS led to a sudden increase in research reports. As a result, Takahashi (2006)<sup>8</sup> as well as Yin et al. (2010)<sup>9</sup> reported a comprehensive review of acupuncture and moxibustion treatment for digestive disorders. The crux of the matter will be introduced below, where a relatively high proportion of the reviews introduces research on salivary secretion, gastric acid secretion and gastrointestinal disorders, especially IBS.

#### 2. Acupuncture and Salivary Secretion

Research on Acupuncture and salivary secretions precedes the conditions of clinical research, Blom et al. (1992)<sup>10</sup> reported, when compared to the placebo control group, patients with dry mouth associated with Sjogren's syndrome experienced significant increases in salivary secretions following needle retention acupuncture. Additionally, Dawidson et al., reportedly confirmed the mechanism for increased salivary secretions following acupuncture was thought to be due to an increase in blood vessel dilatory factors such as CGRP<sup>11</sup> and VIP<sup>12</sup> leading to improved circulation to salivary glands. O'Sullivan et al.<sup>13</sup> emphasized the importance of extremely accurate acupuncture RCTs to assure clinical effectiveness and patient safety. This groups clinically evaluated 3RCTs demonstrating that acupuncture effectively mitigated the dry mouth that often results as a side effect of radiation therapy for head and neck cancer patients. Omata et al., conducted clinical research and reported in Japan that high frequency electro-acupuncture on facial points increased salivary secretions and mitigated dry mouth symptoms associated with Sjogren's syndrome<sup>14</sup>. Further, Omata et al. reported in 2007 that at the time of high frequency electro-acupuncture stimulation (1Hz and 30Hz) measurable VIP emissions caused blood vessel dilation that led to

significant increases in secretions such as tears, the amount of salivary secretions and facial skin temperature changes. Tears and salivary secretions were confirmed to increase with 30 Hz electro-acupuncture stimulation<sup>15</sup>.

As reported above, acupuncture treatment has been clinically shown to increase salivary secretions, however, the functional mechanism of that process has yet to be convincingly clarified. It has been suggested that increased blood flow to an area as a result of increased blood vessel dilation factors in the area would accelerate secretions, however further research is thought to be necessary (Table 1).

Table 1 Salivary Secretion

Author	Year of Publication	Subject, Object of study	Number of Cases	Method of stimulation	Conclusion	Journal
Blom M.	1992	Xerosis	21	Needle Retention Technique vs. Sham needling (Shallow needling)	Salivary Gland Secretion increase due to shallow needling	Oral Surg Oral Med Oral Patho
Blom M.	1996	HNC	38	Sham Acupuncture (1 cm far from acupoint & shallow needling) vs. Manual Acupuncture stimulation	Salivary secretion increase due to acupuncture, shallow acupuncture and no significant difference Manual acupuncture stimulation	Eur J Cancer, B. Oral Oncol
Dawidson I.	1998	Xerosis patient	65	Manual Acupuncture with Qi arrival	Increased Salivary secretion, increased VIP concentration within the saliva	Neuropeptides
Dawidson I.	1999	Xerosis patient	65	Manual Acupuncture with Qi arrival	Increased Salivary secretion, increased CGRP concentration within the saliva	Neuropeptides
Omata H.	2000	In both Sjogren's syndrome and healthy subjects	Healthy subjects =10 Subjects with Xerosis =10	Electro-acupuncture in the cervical (neck) area/ Facial area electro-acupuncture	Effectiveness of facial electro-acupuncture (20Hz), Dray Score improvement	The Japan Society of Balneology, Climatology and Physical Med
Omata H.	2007	In both Sjogren's syndrome and healthy subjects	Healthy subjects =10 Subjects with Xerosis =11	Facial electro-acupuncture 1Hz vs. 30Hz	Increased tears volume following 30Hz electro-acupuncture, 1 and 30Hz electro-acupuncture causes increased saliva volume, facial epidermis temperature increase with 1 Hz electro-acupuncture	The Autonomic Nervous System
Cho JH.	2008	HNC	12	Needle Retention Technique vs. Sham needling (Shallow needling)	Acupuncture and shallow acupuncture causes an increase in salivary gland secretion, subjective symptoms significantly improved	J Altern Complement Med
Pfister DG.	2010	NHC	58	Manual acupuncture stimulation vs. standard acupuncture treatment	XI Score significantly decreased with acupuncture	J Clin Oncol

### 3. Acupuncture and Gastric Acid Secretion

It is thought that Sodipo et al.<sup>16</sup>, were among the first European and American researchers to report on the effects of Acupuncture therapy on gastric acid secretions. These researchers used a 6 week protocol of acupuncture, moxibustion and electro-acupuncture on patients with duodenal ulcers and non-ulcerative indigestion. The patients reported elimination of stomach pain and, within the duodenal ulcer group, because there was a reduction in maximum-stimulation gastric acid secretion the researchers concluded that acupuncture inhibits gastric acid secretion in these patients.

Within the field of basic research, Zhou et al. (1984), treated and unanesthetized dog with a gastric fistula using electro-acupuncture on ST36(足三里), PC 6(内关), and UB 21(脾俞) for 2 hours and observed inhibition of gastric acid secretion, this response was reported as inhibition of gastric acid secretion by the somato-autonomic nerve reflex because the reaction disappeared with the administration of the Vagal nerve blocker Atropine and/or local anesthesia, procaine<sup>17</sup>.

Also, Jin et al., observed that acupuncture stimulation was capable of inhibiting amino acid induced gastric acid secretion in under conscious dogs. Because this reaction was eliminated by naloxone, it was thought that endogenous opioids must be related to the pain relief mechanism of acupuncture related pain relief<sup>18</sup>. On the other hand, Noguchi et al., observed accelerated gastric acid secretion in anesthetized rats treated with electro-acupuncture at ST36. Because this reaction was eliminated by severing the Sciatic and/or Vagus nerves, it was reported that the accelerated gastric secretions must involve the somato-autonomic nerve reflex<sup>19</sup>.

Currently, there are numerous reports concerning gastric secretion resulting from acupuncture stimulation, unfortunately the results and hypothesized mechanisms remain unclear. Furthermore, given recent developments in pharmaceutical treatments and elucidation of the mechanisms involved in ulcer occurrence, the importance of clarifying and reporting on acupuncture's role in controlling gastric acid has been diminished (Table 2).

Table 2 Gastric Acid Seretion

Author	Year of Publication	Subject, Object of study	Number of Cases	Method of stimulation	Conclusion	Journal
Sodipo J	1979	Gastric Ulcer patient	10	Retention method of Acup., electro-Acupuncture, Moxa on sliced ginger	Reducing gastric ulcer pain is related to reducing the amount of gastric acid secretion	Am J Chin Med
Zhou L	1984	Conscious dogs	5	Electro Acup. vs. Manual Acup.	Sham Acup. <Manual Acup.<Electro-acup. reduces gastric acid secretion	Life Sci
Jin H	1996	Conscious dogs	5	No stimulation vs. Shallow Acup. vs. Electro-Acup.	Acupuncture shown to suppress gastric acid secretion following amino acid ingestion	Am J Physiol
Noguchi E	1996	Anesthetized rats	56	Electro Acup. on St 36 (足三里) vs. LI 10 (手三里)	Electro-Acup. at ST36 accelerated Gastric acid secretion	J J Phsiol



#### 4. Acupuncture and Gastrointestinal Dysfunction

Li et al.(1992) , reviewed 25 reports, published between 1979-87, on the role of acupuncture in gastrointestinal function and disorders. A majority of the reviewed papers (17) used basic research papers, whereas only 8 reports used human subjects for functional and clinical research <sup>6</sup>.

Since 1997, the National Institutes of Health, NIH have announced a general consensus with respect to acupuncture and have generously made funds available for further research. As a result, numerous reports on the usefulness of acupuncture for stomach and intestinal function have been published by American Medical Universities <sup>20</sup>. Takahashi (2006)<sup>8</sup> reported on the above results, focusing on acupuncture and functional gastrointestinal disorders. In the following section we will summarize the Yin et al., report on gastrointestinal motility disorders (2010) <sup>9</sup>.

Recent studies on acupuncture treatment for gastrointestinal disorders reflects a growing social need, so IBS research has been conducted quite energetically. For these reasons the following two reports (2006, 2007) were selected for this systematic review. Lim et al.(2006), used online databases PubMed, the Cochrane Central Register of Controlled Trials (CENTRAL) on *The Cochrane Library*, EMBASE, the Chinese Biomedical Database, the Cumulative Index to Nursing and Allied Health (CINAHL), and the Allied and Complementary Medicine Database (AMED) to analyze and extract 6 relevant clinical studies (Table 3). The results did not confirm statistically significant differences in studies where sham acupuncture was set up as a group to be compared to standard acupunctures, but did report that when acupuncture was set as the control group symptoms often improved <sup>21</sup>. However, a large portion of the reviewed clinical papers were of low quality and although meta-analysis was attempted, only 2 reports were worth analyzing. For these reasons, it is difficult to make a judgment about the

effectiveness of acupuncture, sham acupuncture (shallow acupuncture) or another intervention for IBS.

In 2007, Schneider et al., investigated all the clinical papers related to acupuncture used to treat gastrointestinal disorders on MEDLINE (submitted until 2006) (Table 3).

Their results included 18 extracted reports, from these they selected 4 RCTs that met the standard criteria and used these for their systematic review. The subject of two of these papers was Irritable Bowel Syndrome (IBS) and Crohn's Disease (CD), one paper discussed Ulcerative colitis and one discussed Inflammatory Bowel Disease (IBD). Discussion within these papers related to the usefulness of acupuncture and sham acupuncture (shallow acupuncture) for these conditions as well as whether or not the patient's quality of life (QOL) significantly improved. Acupuncture treatment was found to be significantly more effective for patients with Crohn's Disease and Colitis than sham acupuncture (shallow acupuncture) regarding the activity of the disorders (CAI score). From these results, it has been thought that the effect acupuncture may have on QOL for IBS patients is non-specific, but because the possibilities are detectable, there is a clear imperative for further research <sup>22</sup>.

In this way, it has been suggested that acupuncture has the potential to be effective for IBS, Crohn's Disease, Ulcerative colitis, etc., and other gastrointestinal function disorders, but this conclusion has not been fully verified.

However, according to MacPherson et al.(2010), they currently have 233 IBS patients whose results are being analyzed and they anticipate publishing a new systematic review <sup>23</sup>(Table 3).

So while these two systematic reviews at once give the impression that the possibility of effective acupuncture exists, there is also the impression that both acupuncture and sham acupuncture provide

little more effect than a Placebo. The origin of these conclusions are strongly reflected in the current research model that equates “sham acupuncture” with a “non-invasive control”, when this assumption has not been universally approved. When using sham acupuncture as a control (non-invasive, non-stimulation = placebo) differing “doses” of stimulation have been confirmed. That is to say, the stimulation from sham or non-invasive stimulation (as a control or a placebo) is thought to be sufficient to provide a therapeutic effect.

As for Japan, conducting acupuncture and moxibustion RCTs has been relatively difficult, in fact, in recent years Japan has contributed almost no meaningful clinical research RCTs. However, in light of some outstanding recent report using acupuncture to treat IBS that utilizes an inversion method, it is now being thought that methods besides RCTs that are still evidence based medicine (EBM) are certainly possible<sup>24</sup>. Moving onward from this point, it is now necessary to confirm acupuncture and moxibustion research methodologies in Japan.

Table 3 Lim’s Systematic Review, The Cochrane Library, 2005

No	Author	Year of Publication	Category	Subject, Object of study	Number of Cases	Method of stimulation	Conclusion	Journal
1	Fireman Z	2001	RCT	Israeli Patient with IBS	25	LI4(合谷) stimulation vs. Sham acup. (UB60:崑崙)	Comparing Acup. with Sham Acup. treatment, Abdominal pain as well as over all complaints were improved, there was no significant difference in improvement between the 2 groups.	Digestion
2	Forbes A	2005	RCT	English IBS out patient	59	Chinese Acup. vs. Sham acup. using non-meridian points	Acupuncture seems to be superior to Sham treatments, but there is no significant difference. Accordingly, Acupuncture has relatively little effect on IBS	World J Gastroenterol
3	Liao YC	2000	RCT	Chinese IBS Patient	97	Chinese Acup. with Psychological Counseling vs. Chinese Herbal Medicine with Psychological Counseling	Acupuncture with Psychological Counseling is more effective than Chinese Herbal Medicine with Psychological Counseling	Clin Acup & Mox
4	Liu M	1995	RCT	Chinese IBS Patient	37	Chinese acup., Ear acup., Western drug treatment	Ear acup. is more effective than Western drug treatment	Shanghai J Acup & Mox
5	Liu GZ	1997	RCT	Chinese IBS Patient	50	Chinese Acup. vs. Chinese Acup. with Psychological Counseling	Compared to using Acup. alone, Combining Acup. with some counseling is more effective	Chin Acup & Mox
6	Lowe C	2000	RCT	Canadian Patient	28	Chinese Acupuncture vs. Sham Acupuncture by blunt needles	Acupuncture is not especially effective for IBS	Gastroenterology

Table 3 Schnelder's Systematic Review, World J Gastroenterol, 2007

No	Author	Year of Publication	Category	Subject, Object of study	Number of Cases	Method of stimulation	Conclusion	Journal
1	Forbers A	2005	RCT	IBS Patient	59	Chinese Acup. vs. Sham Acup. (Non-meridian points)	Acupuncture is superior to Sham Acupuncture but there is no significant difference. Further, Acupuncture is not especially effective for IBS	World J Gastroenterol
2	Joos S	2004	RCT	Patient with Chrohn's Disease	51	Chinese Acup. and Mox. vs. Sham Acup. (shallow stimulation on meridian points)	In line with CAI, acupuncture is considered more effective than Sham acupuncture. It appears that Acupuncture is moderately effective for Chrohn's Disease	Digestion
3	Joos S	2006	RCT		29	Chinese Acup. and Mox. vs. Sham Acup. (shallow stimulation on meridian points)	In line with the Colitis Activity Index (CAI), Acupuncture is considered more effective than Sham acupuncture, but considering QOL there is no difference between the two. It appears that Acupuncture is moderately effective for ulcerative colitis (UC).	ScanJ Gastroenterol
4	Scheider A	2006	RCT	IBS Patient	43	Chinese Acup. vs. Sham (Streitberger) acup.	Both Acup. and Sham Acup. contribute to an improved QOL for the patient. Acupuncture's effect is mostly attributed to the Placebo effect.	Gut
5	Liu GZ	1997	RCT	Chinese IBS Patient	50	Chinese Acup. vs. Chinese Acup. with Psychological Counseling	Compared to using Acup. alone, Combining Acup. with some counseling is more effective	Chin Acup & Mox
6	Lowe C	2000	RCT	Canadian Patient	28	Chinese Acupuncture vs. Sham Acupuncture by blunt needles	Acupuncture is not especially effective for IBS	Gastroenterology

## References

### General view of research

1. Jujiro Kashida, Kazuo Harada: About Acupuncture and Moxibustion. Journal of the Medical Society of Tokyo 26: 735-762, 1912
2. Michio Goto: About Head's zone and Acupuncture technique. Medical Journal of the Kyoto Medical Society 11: 303-330, 1914
3. Fuji Shuji, Takeuchi Goro: Influence of Pediatric Acupuncture on Digestive motility (Investigative Research). Medical Society of Osaka 28: 2029-2032, 1929
4. Sato A, Sato Y, and Schmidt RF: The impact of somatosensory input on autonomic functions. Rev Physiol Biochem Pharmacol 130: 1-328, 1997
5. Noguchi E: Acupuncture regulates gut motility and secretion via nerve reflexes, Autonomic Neuroscience: Basic and Clinical 156: 15-18, 2010
6. Li Y, et al: The effect of acupuncture on gastrointestinal function and disorders. The American Journal of Gastroenterology 87(10): 1372-1381, 1992

7. Eitaro Noguchi, Kenji Imai, Eiji Sumiya, et al.: The Effects of Acupuncture and Moxibustion on Visceral Pain, Digestive Function and Digestive Symptoms. *Journal of the Japan Society of Acupuncture and Moxibustion* 51: 466-491, 2001.
8. Takahashi T: Acupuncture for functional gastrointestinal disorders. *J Gastroenterol* 41: 408–417, 2006
9. Yin J, Chen JD: Gastrointestinal motility disorders and acupuncture. *Autonomic Neuroscience; Basic and Clinical* 157: 31-37, 2010

### Saliva

10. Blom M, Dawidson I, Angmar-Månsson B: The effect of acupuncture on salivary flow rates in patients with xerostomia. *Oral Surg Oral Med Oral Pathol* 73: 293-8, 1992
11. Dawidson I, Angmar-Månsson B, Blom M, Theodorsson E, Lundeberg T: Sensory stimulation (acupuncture) increases the release of vasoactive intestinal polypeptide in the saliva of xerostomia sufferers. *Neuropeptides* 32(2): 543-8, 1998
12. Dawidson I, Angmar-Månsson B, Blom M, Theodorsson E, Lundeberg T: Sensory stimulation (acupuncture) increases the release of calcitonin gene-related peptide in the saliva of xerostomia sufferers. *Neuropeptides* 33(3): 244-250, 1999
13. O'Sullivan EM, Higginson IJ: Clinical effectiveness and safety of acupuncture in the treatment of irradiation-induced xerostomia in patients with head and neck cancer : a systematic review. *Acupunct Med* 28(4): 191-9, 2010
14. Hiroshi Omata, Satoru Yamaguchi, Shuji Ono et al: Effectiveness of acupuncture treatment for the dry symptoms associated with Sjogren Syndrome. *The Journal of the Japanese Society of Balneology, Climatology and Physical Medicine* 63 (2): 79-90, 2000
15. Hiroshi Omata, Satoru Yamaguchi, Naotoshi Tamura et al: Influence of Electro-Acupuncture on Facial Autonomic Nerve Function. *The Autonomic Nerve System* 44 (5): 379-382, 2007

### Gastric Acid

16. Sodipo JO, Falaiye JM: Acupuncture and gastric acid studies. *Am.J.Chin.Med.* 7 (4 ): 356-361, 1979
17. Zhou L, Chey WY: Electric acupuncture stimulates non-parietal cell secretion of the stomach in dog. *Life Science* 34: 2233-2238, 1984
18. Jin HO, Zhou L, Lee KY, Chang TM, Chey WY: Inhibition of acid secretion by electrical acupuncture is mediated via beta-endorphin and somatostatine. *Am J. Physiol G* 524-530, 1996
19. Noguchi E, Hayashi H: Increases on gastric acidity in response to electroacupuncture stimulation of the hindlimb of anesthetized rats. *Japan Journal of Physiology* 46: 53-58, 1996

### IBS

20. Hideo Anzai: Research on Complementary and Alternative Medicine in America. *Clinical Herbal Medicine* 51 (8): 1132-1137, 2004
21. Lim B, Manheimer E, Lao L, Ziea E, Wisniewski J, Liu J, Berman BM: Acupuncture for treatment of irritable bowel syndrome (Review). *Cochrane Database Syst Rev.* 18: 1-37 2006
22. Schneider A, Streitberger K, Joos S: Acupuncture treatment in gastrointestinal diseases: A systematic review. *World J Gastroenterol* 13: 3417-3424, 2007
23. MacPherson H, Bland M, Bloor K, Cox H, Geddes D, Kang'ombe A, et al: Acupuncture for irritable bowel syndrome: a protocol for a pragmatic randomised controlled trial. *BMC Gastroenterol* 10: 63, 2010
24. Jun Matsumoto, Naoto Ishizaki, Kenji Namura, et al: Effect of Acupuncture Treatment in Patients with Irritable Bowel Syndrome – A Series of Single Case Study-. *Journal of the Japan Society of Acupuncture and Moxibustion* 55: 56-67, 2005

## Kampo Medicine - Current Research

*Investigation of Clinical Indications of Goreisan in Patients with Epigastralgia in the Summer Season*  
— From the “Goreisan Symposium 2010”—

Yoko Kimura

Institute of Oriental Medicine,  
Tokyo Women’s Medical University,  
School of Medicine

### [Abstract]

Teian Azai classically described that summer heat was caused by humidity in addition to hot weather. It may occur after getting chilled while asleep, enjoying the evening cool and taking cold foods and drinks. Humidity and high temperature prevent qi circulation in the stomach. Therefore, he insisted that *goreisan*, a formula improving water circulation, could be applied for diverse symptoms caused by summer heat. We present two cases of patients with epigastralgia caused by cold foods and drinks in air-conditioned environments, whose symptoms were improved by *goreisan*. In prior treatment, *anchusan* in case 1, and *rikkunshito* in case 2 were not effective for their epigastralgia. Nineteen cases of epigastralgia after taking cold foods and drinks in summer, including these two cases, revealed that *goreisan* was efficacious against the summer epigastralgia with white fur on the tongue and a stuck feeling in the pit of the stomach. Abdominal fluid congestion is a major abdominal sign for an indication of *goreisan*, but a stuck feeling in the pit of the stomach appeared in some effective cases of *goreisan*. We concluded that epigastralgia caused by cold foods and drinks with white fur on the tongue and a stuck feeling in the pit of the stomach could be a target for the application of *goreisan*.

### [Keywords]

*goreisan*, epigastralgia, summer heat, cold drinks and foods

### [Introduction]

*Goreisan* is based on ancient Chinese medical books “Shanghanlun” (Treatise on Cold Damage Diseases) and “Jinguiyaolue” (Synopsis of Prescriptions of the Golden Chamber), and is a representative prescription used for all types of “Water toxin”, such as edema, vertigo, headaches, and diarrhea. In clinical practice, it is applied for vomiting, watery diarrhea and other such gastrointestinal colds, as well as for cyclic vomiting, migraine headaches, trigeminal neuralgia, hangovers, vertigo, nephritis, and nephrotic syndrome<sup>1)</sup>. Signs for using *goreisan* include dry mouth, low urine output, water-counterflow-like vomiting, and splashing sound in the epigastric region<sup>1)</sup>.

Recently, I saw patients who developed epigastric pain triggered by consuming cold foods during the summer, and improved after taking *goreisan*. There have been no case reports published that described epigastric pain improved by *goreisan*. Thus, a retrospective comparison study was performed, comparing effective cases using *goreisan* with ineffective cases. The study aimed to clarify what types of epigastric pain *goreisan* is effective against.

### A) Cases of improvement of epigastric pain by *goreisan*

#### [Case 1] 47-year-old female care manager

**Chief complaint:** Epigastric pain

**Past medical history:** None in particular

**History of present illness:** From around 2 years ago, the patient’s symptoms of cold sensitivity and menstrual pain had lightened after taking *tokishakuyakusan* and *tokishigyakukagoshuyushokyoto* that was prescribed by the hospital. From mid-July, the humid heat of summer prompted her to frequently consume ice cream and cold beverages in an air-conditioned environment, and she began to experience piercing pains near her stomach. She thus sought medical attention.

**Subjective symptoms:** The patient complained of thirst, excessive consumption of liquids, epigastric pain, loose stool, and edema in her legs. She experienced no excessive sweating or low urine output.

**Physical observations:** 155cm, 50kg (BMI 20.8), blood pressure 108/68 mmHg, pulse 68/min.

Normal facial complexion. No vacuous nor forceful pulse. Pale red tongue with a white fur. Medium abdominal muscle strength, and signs of epigastric discomfort and resistance.

**Progress:** The epigastric pain was thought to be caused by consuming cold foods and beverages. The patient was treated by 7.5g/day of *anchusan* for two weeks containing crude drugs such as *Corydalis Tuber*, *Alpiniae Officinari* Rhizoma, *Amomi* Semen, *Foeniculi* Furctus and *Cinnamomi* Cortex that warm the body and act against stomach pains. However, her symptoms did not ameliorated, and 7.5g/day of *goreisan* was prescribed, focusing on the symptoms caused by “Water toxin”, characteristics of which includes loose stool and edema in the legs. As a result, the patient’s epigastric pain had improved by the time she visited the hospital two weeks later. As her symptoms resolved, the *goreisan* prescription was terminated, but the epigastric pain relapsed the following day, and she was prescribed a continued dose of 5 to 7.5g/day of *goreisan*, and her symptoms have been improving.

## [Case 2] 57-year-old housewife

**Chief complaint:** Epigastric pain, nausea

**History of present illness:** She had been taking *rikkunshito* for upset stomach due to chronic gastritis, and her symptoms had been contained. However, around July, when the summer heat began to set in, she started to consume cold foods such as ice cream and watermelon, and came to experience epigastric pain and nausea. Her symptoms would lighten somewhat after taking *rikkunshito*, but she sought medical attention, as the epigastric pain and nausea continued.

**Subjective symptoms:** The patient complained of cold sensation (feet), general malaise, dry mouth, excessive consumption of liquids, loss of appetite, heavy stomach feeling, epigastric pain and nausea. She had regular bowel movement, and experienced no excessive sweating or edema.

**Physical observations:** 161cm, 54kg (BMI 20.8), blood pressure 118/64 mmHg, pulse 68/min.

Normal facial complexion. No vacuous nor forceful pulse. Pale red and enlarged tongue with a white and greasy fur. Weak abdominal strength, and signs of epigastric discomfort and resistance and splashing sound in the epigastric region. Coldness of extremities was also observed.

**Progress:** Because *rikkunshito* did not completely improve the patient’s symptoms, her epigastric pain and nausea were thought to be caused by consuming cold foods and beverages. A splashing sound in the epigastric region indicated 7.5g/day of *goreisan*. Two weeks later, her epigastric pain improved, but she continued to take *goreisan*, as she claimed that she felt better when she took *goreisan*.

## B) Study of effective and ineffective cases of *goreisan*

*Goreisan* was administered to 19 patients who complained of epigastric pain triggered by consuming cold foods and beverages, and the effective cases (16 cases) and ineffective cases (3 cases) were summarized in the Table. In all cases, epigastric pain occurred after consuming cold foods and beverages when the weather became hot. The epigastric pain was mostly described as a “heavy pain,” “piercing pain” or “tingling pain.” Among the effective cases, the epigastric pain improved with *goreisan*, after switching from *anchusan* (cases 1, 7, 8, 10), *rikkunshito* (cases 2, 3, 5) and *heiisan* (case 13), which indicated ineffectiveness of these formulae. Among the ineffective cases, epigastric pain and canker sores improved with *orento* and *hangeshashinto*.

No clear different characteristics were seen between patients in the effective and ineffective

groups with regard to such symptoms as thirst, low urine output, diarrhea and edema; however, a significant difference was observed with respect to tongue fur. Among cases in which *goreisan* was effective against epigastric pain, the patients' tongues had a white fur or a white and greasy fur. Among the ineffective cases, the patients' tongues had a yellow fur. Additionally, regarding abdominal findings, patients in the effective group had epigastric discomfort and resistance (15 out of 16 cases) more than they did a splashing sound in the epigastric region (5 out of 15 cases). Furthermore, their epigastric discomfort and resistance ameliorated as their epigastric pain improved.

### [Observations]

Two cases were presented in which *goreisan* was effective against epigastric pain accompanying the consumption of cold foods and beverages during the hot summer, and 19 cases were examined to determine the types of epigastric pain *goreisan* is effective against. Among patients who complained of epigastric pain that was triggered by cold foods and beverages, *goreisan* tended to be effective in those who had a white coating on their tongue and displayed epigastric discomfort and resistance in an abdominal examination.

The "Byomeiikai" (Collected Explanations of Disease Names) by Keishu Ashikawa describes damp stroke as a disease caused by summerheat. Damp stroke is divided into "external damp" and "internal damp". The former occurs when the patient is rained upon in a marshy place or goes into the water, while the latter occurs when the patient consumes an excessive amount of foods that are cold raw foods, fruits or noodles, and drinks a large amount of liquor or tea."<sup>2</sup>

The summer heat section of "Hoikuketsu" (The Clinical pearls of Prescription Collection) by Teian Asai writes, "Summerheat stroke is a common manifestation; however, it occurs often not only by

the summerheat-heat but also by the yin pathogen or unhealthy qi. One gets chilled while asleep and enjoying the cool of the evening, and one is affected by the yin-qi of the night. In addition, one takes raw foods and cold drinks because of hotness, and exterior side receives a yin-cold qi and interior side is harmed by cold foods and drinks. This is seen in 70% to 80% of cases of summerheat-strokes."<sup>3</sup> It explains that heat strokes are caused not only by heat but also by humidity, and that seven to eight times out of ten, it is caused by cooling the body, such as by sleeping with chills, sitting out in the cool breeze, or consuming cold foods and beverages.

It also notes, "If the heat enters the exterior, behind which it includes dampness and yin-qi, and water-dampness accumulates inside, it is recommended to administrate medicine for the summer-heat stroke. For this reason, when treating summer-heat, formulae like *byakkoto* will be prescribed for internal and external heat; formulae like *goreisan* for the exterior summerheat and interior dampness; formulae like *seishoekkito* for the exhaustion of source qi and yang-qi. These three methods should be differentiated and combined to treat summerheat"<sup>3</sup> It explains that *goreisan* should be used when there are signs of exterior summerheat and interior dampness.

With regard to summer health, "Shiki Choushin Tairon" (Si Qi Tiao Shen Da Lun, On Presenting Health in Accordance with the Four Seasons) of "Huang-di Nei-jing, Su Wen" Chapter 2 contains the phrases "Don't detest the sun" and "Let qi leak, like loving place is outside."<sup>4</sup> Shibasaki<sup>5</sup> explains them as meaning that in the summer, one must bask in the sun without disliking the sun, and take care not to be preoccupied with seeking shades, pursuing coolness and avoiding the heat. Furthermore, one must allow the qi inside the body to flow out of the body at all times, and prevent it from being pent up inside the body.

*Goreisan* is composed of *Alisma Tuber*, *Polyporus Sclerotium*, *Poria Sclerotium*, *Atractylodis Rhizoma* and *Cinnamomi Cortex*. The early yang stage section of “Shang-Han-Lun” contains the passages, “When in greater yang disease, after sweating is promoted and great sweat issues, [if there is] dryness in the stomach, vexation and agitation with insomnia, and a desire to drink water, giving a small amount of water will harmonize the stomach qi so that recovery [will ensue]. If the pulse is floating and [there is] inhibited urination, slight heat and dispersion—thirst, *goreisan* governs it.” And “When sweating has already been promoted, the pulse is floating and rapid, and [there is] vexation and thirst, *goreisan* governs it.”<sup>6)</sup> (This translation is quoted from “Shang Han Lun: On Cold Damage” written by Craig Mitchell et.al, 1999). This means *goreisan* should be used in the early yang stage when consuming fluids mitigates the symptoms of irritability and dry mouth following sweating, but the patient has a floating pulse, abnormal urination, low-grade fever and dry mouth. It also states that *goreisan* is the chief treatment for patients who have yet to sweat sufficiently, whose exterior pattern remains, and who have a sunken pulse and extreme thirst.

Due to the spreading of air conditioners today, we tend closely to “seek shades, pursue coolness and avoid the heat,” as mentioned above, and do not sweat or give vent to our qi enough. At such times when we do not sweat sufficiently when it is hot and allow “dampness” to accumulate in our body, *goreisan* or other such medicine that dissipates fluids becomes necessary.

The summer heat section of “Hoikuketsu” by Teian Asai contains the following passage about *goreisan*, “This prescription is used for all summerheat stroke. ...When it is hot, the closed atmosphere contains dampness. It contains the qi of yin-dampness. Therefore, to eliminate summerheat evil to treat heat stroke, eliminate the heat utilizing

the way of the water. Thirst, oliguria, and stool dysregulation are signs of poor water circulation. The circulation of yang-qi in the Spleen and Stomach is disturbed by dampness, and this is the target of *goreisan*. Understanding its main indication, you can apply *goreisan* to various situations.”<sup>3)</sup> This means that *goreisan* may be widely used for heat strokes in general to remove fluids that accompany “dampness” when it is hot and hinders the circulation of qi inside the stomach.

Additionally, since *anchusan*, *rikkunshito* and *heisan* were ineffective in half of all effective cases (8/16 cases), it was thought that dissipating “dampness” with *goreisan* is also important to alleviating epigastric pain occurring from consuming cold foods and beverages.

In this study, no certain trend was seen with regard to dry mouth, low urine output and edema, which were considered signs for utilizing *goreisan*, but in cases where *goreisan* was effective against epigastric pain, white tongue coating was observed and epigastric discomfort and resistance was observed in an abdominal examination. In the 16 effective cases that were studied, epigastric discomfort and resistance was more predominant than a splashing sound in the epigastric region, as a result of abdominal examination. The passage, “If there is the palpitations below the heart, give *shashinto*. If it does not heal, *goreisan* governs it”<sup>7)</sup> (This translation is quoted from “Shang Han Lun: On Cold Damage” written by Craig Mitchell et.al, 1999) in the Greater yang disease stage section of “Shang-Han-Lun” states that *goreisan* should be used for epigastric discomfort that cannot be mitigated with *shashinto* preparations. This implies that epigastric discomfort may occur due to fluid disturbance. As a case report on treating abdominal pain with *goreisan*, it is written in “Kohobinran”, “A patient presented with thirst, epigastric palpitations and severe abdominal pain to the level that he could not sit down. Dr. Todo Yoshimasu examined this



patient and said “This is an indication of *goreisan* pattern,” referring to cases in which Todo Yoshimasu successfully treated abdominal pain with *goreisan*<sup>8)</sup>. Additionally, Furuya et al. reports on a case in which epigastric pain of unknown cause was alleviated with *goreisan*<sup>9)</sup>. In this case, the patient had a gripping pain in the epigastric region, and an abdominal examination found epigastric discomfort and resistance in the same way as other cases in this study, in addition to bilateral rectus abdominis.

As discussed above, the comorbidity of epigastric pain due to consumption of cold foods and beverages, white coating on tongue, and epigastric discomfort and resistance may be signs for the administration of *goreisan*.

### [Conclusion]

Heat strokes are caused not only by heat by also by “dampness” that hinders the circulation of qi inside the Stomach and intestine. For this reason, it is important to eliminate the “dampness,” and *goreisan*, which is effective for heat strokes in general, was applied to cases in which epigastric pain occurred on occasion of consuming cold foods and beverages in an air-conditioned environment. In cases of epigastric pain for which *goreisan* was effective, white tongue coating and epigastric discomfort and resistance were observed. Since it is necessary to eliminate the “dampness” to alleviate epigastric pain that is triggered by the consumption of cold foods and beverages, *goreisan* is thought to be an effective prescription.

Supplementary note: *Hachimigan* from Uchida Wakanyaku Ltd. was used in case 18, but all other medical Kampo extract preparations were from Tsumura & Co.

### References

- 1) Ishino, Shogo: *Goreisan*. Shinpan Kampo Igaku 2nd Edition: 257-259, Institute of Kampo Medicine, Tokyo, 1999.
- 2) Ashikawa, Keishu: Chushitsu. Byomeiikai (Commentary of the Name of Diseases) vol. 2, Kinsei Kampo Igakusho Shusei 64: 182, Meicho Shuppan, Tokyo, 1982.
- 3) Asai, Teian: Chushomon. Hoikuketsu (The Clinical pearl of Prescription Collection), vol. 3, Kinsei Kampo Igaskuho Shusei 77: 283-311, Meicho Shuppan, Tokyo, 1981.
- 4) Koteidaikeisomon, Kojutoku-bon (Huang di Nei jing Su Wen, Gù Cóng-dé version)” Chapter 2 “Shiki Choushin Tairon, Si Qi Tiao Shen Da Lun, On Preserving Health in Accordance with the Four Seasons”. Jukohochu Koteidaikeisomon No. 1: 8-10 (1-11a – 1-14b), in the “Sì kù shànběn cónghū”, Nippon Keiraku Gakkai, Tokyo, 1992.
- 5) Shibasaki, Yasuzo: “Shiki Choushin Tairon Hen“ Part II. Shinkyu Igakutaikai 1 Koteidaikeisomon Josetsu – Main part No. 1 – 4: 259-270, Yukonsha, Kyoto City, 1979.
- 6) Cho, Chupei (Zhang Zhong-jing): Shokanron (Shang-Han-Lun, Zhào kāiměi version) vol. 3: 134-135 (3-17b-3-18a), Ryogen Shoten, Tokyo, 1988.
- 7) Cho, Chupei (Zhang Zhong-jing): Shokanron (Shang-Han-Lun, Zhào kāiměi version ) vol. 4: 166 (4-3b), Ryogen Shoten, Tokyo, 1988.
- 8) Rokkaku, Shigeto: Kohobinran, Nihon Kampo Meii Shoho Kaisetsu vol.1 Kohokei1: 430-431, Orient Shuppansha, Tokyo, 1989.
- 9) Furuya, Yoichi; Nogami, Tatsuya; Watanabe, Tetsuro; Shimada, Yutaka: A case in which *goreisan* was effective against epigastric pain of unknown cause. Journal of Kampo Medicine 53(10), 2006.  
(This report has been prepared by partially revising “Kimura et al.: Kampo Medicine 61(5): 722-726, 2020”.)

(This report has been prepared by partially revising “Kimura et al.: Kampo Medicine 61(5): 722-726, 2020”.)

Table: Breakdown of the 19 cases in which *goreisan* was used for epigastric pain

Case	Age/Sex BMI	Character istics of epigastric pain	Symptoms other than epigastric pain	Underlying disease	Previous prescription (day)	Dry mouth	Excessive consumption of liquids and low urine output	Diarrhea	Edema	Tongue color	Tongue coating	Teeth marks on tongue/ Epigastric discomfort/ Splashing sound in epigastric region/ Other abdominal patterns	Judgment of effectivity
1	47/female 21	Piercing pain	Chronic gastritis	Chronic gastritis	archusan 7.5g	+	+	?	Loose stool	Legs	White	? + + ?	Effective
2	57/female 21	Heavy pain	Nausea	Chronic gastritis	rikushuho 7.5g	+	+	?	?	?	White and greasy	? + + ?	Effective
3	45/female 21	Heavy pain	Chronic gastritis, Menopausal symptoms	Chronic gastritis, Menopausal symptoms	rikushuho 5g + hochuakhto 5g	+	+	?	Loose stool	?	White	+ + + +	Effective
4	26/female 20.0	Piercing heavy pain	Dysmenorrhea	Dysmenorrhea	keishibukuryogankyokunin 7.5g	+	+	+	Loose stool	Feet, face	White and greasy	+ + + ?	Effective
5	24/female 17	Tingling heavy pain	Chronic gastritis	Chronic gastritis	rikushuho 5g + hangokoboku 5g	+	+	?	Loose stool	?	White	? + + +	Effective
6	42/female 24	Heavy pain	Vertigo, gastrointestinal weakness	gastrointestinal weakness	hangebyakujutsuamemato 5g	+	+	?	?	Dizziness	White	+ + + ?	Effective
7	35/female 21	Tingling heavy pain	Alopecia, Chronic gastritis	Alopecia, Chronic gastritis	unketo 7.5g + archusan 7.5g	+	+	?	?	?	White	+ + + ?	Effective
8	28/female 19	Heavy pain	Atopic dermatitis	Atopic dermatitis	archusan 5g + keigirengyoto 5g	+	+	+	?	Legs	White	? + + +	Effective
9	37/female 18	Heavy pain	Premenstrual syndrome	Premenstrual syndrome	kamisyoyosan 5g + unketo 5g	±	±	?	?	?	White	? + + ?	Effective
10	53/female 18	Tingling heavy pain	Chronic gastritis, Menopausal symptoms	Chronic gastritis, Menopausal symptoms	archusan 5g + unketo 5g	±	±	?	?	?	White	? + + ?	Effective
11	31/female 18	Dull pain	Loss of appetite	Loss of appetite	hangebyakujutsuamemato 5g	±	+	?	?	?	White and greasy	+ + + ?	Effective
12	56/female 21	Piercing pain	Vertigo	Vertigo	kamisyoyosan 5g	±	+	?	?	Fingers	White	? + + +	Effective
13	43/female 21	Piercing pain	Dysmenorrhea, Chronic gastritis	Dysmenorrhea, Chronic gastritis	keishibukuryogankyokunin 5g + heisan 5g	+	+	+	Loose stool	?	White	+ + + ?	Effective
14	34/female 16.0	Feeling of heavy pain	Anorexia	Chronic gastritis	yokukansan 5g + shakuyakukanzoto 2.5g	±	±	?	Loose stool	?	White	? + + +	Effective
15	42/female 19	Piercing heavy pain	Postoperative breast cancer	Postoperative breast cancer	Juzentahoto 5g + kamisyoyosan 5g	+	+	?	?	Legs	White	? + + ?	Effective
16	52/female 22	Piercing pain	Postoperative breast cancer	Postoperative breast cancer	hochuakhto 7.5g + kamisyoyosan 7.5g	+	±	?	Loose stool	?	White	? + ?	Painfulness in right side of chest Effective
17	41/male 23	Hot pain	Reflux esophagitis	Reflux esophagitis	shagyakusan 5g + bukuryouhangeishobokuto 5g	+	+	?	?	?	Yellow	? + + ?	Ineffective (improved with hangeishashuho)
18	76/male 21	Dull pain	Lumbago	Lumbago	hachimigan 40 pills + yokukansan 5g	+	+	?	?	Dark red	Yellow	? + + ?	Ineffective
19	54/female 19	Heavy pain	Canker sores	Chronic gastritis	rikushuho 7.5g	+	+	?	?	Legs	Dark red	? + + ?	Ineffective (improved with oreto)

Table : Breakdown of the 19 cases in which *goreisan* was used for epigastric pain

## Clinical Report 1 (Acupuncture)

### *The Cases of Acupuncture and Moxibustion Treatment for Pollakisuria and Nocturia during Pregnancy Thought to be Effective*

Naoko Maeda<sup>1)</sup>, Shuichi Katai<sup>2)</sup>

1) Ayumi Acupuncture and Moxibustion Clinic

2) Department of Health Science,  
Tsukuba University of Technology

#### [Introduction]

Women undergo various physical and mental changes associated with pregnancy. Indefinite complaints classified as minor trouble are associated with suffering and pain that decrease the quality of life of the women during pregnancy. Yet, many of the indefinite complaints improve after the pregnancy and are mostly not actively treated with western medicine based on considerations of possible influences on the fetus. For those reasons folk medicines are adopted in the care for pregnant women, but currently the expecting mothers often endure these conditions until delivery. Here we report two cases in which the acupuncture and moxibustion treatment was considered to be markedly effective in pregnant women visiting a clinic for acupuncture and moxibustion treatment, who were particularly aware of pollakisuria and nocturia among indefinite complaints.

Further, in this manuscript we followed the treatment guidelines<sup>1)</sup> for overactive bladder of the Neurologic Bladder Society and classified the complaints of patients with a too high frequency of micturitions during the daytime as pollakisuria, and complaints about getting up more than once during the night to void as nocturia.

The patients consented to the publication of this case report after receiving oral explanations.

#### [Patient No. 1]

A 36-year old woman, primipara, housewife.

She visited our clinic in order to prepare herself physically for the delivery. During the first visit the gestational age was 22 weeks and 6 days, height 165

cm, weight 64 kg (weight increased by 5 kg from the 59 kg before pregnancy).

The present illness started in the 21<sup>st</sup> gestational week, when she was diagnosed during a pregnancy checkup with gestational diabetes because of urinary sugar (3+). The condition could later be controlled through diet and urinary sugar (+) was later found only once during a pregnancy checkup in the 39th gestational week. Otherwise the pregnancy proceeded uneventful.

Complaints during the first visit were low back pain and shoulder stiffness. The fetus was in cephalic presentation. There was no chilling, but over a distance of about 8 cm above the ankles a ring-like edematous region was observed. Micturition frequency was once every 30 minutes to 1 hour and about 2-3 times per night. Both the pollakisuria and nocturia developed around the time morning sickness resolved by the 14th gestational week.

Five acupuncture and moxibustion treatments were administered in intervals of approximately 4 weeks. The basic treatment was bilateral moxa-needling of SP6 with 3 cones of moxa and a selection of appropriate acupoints for the complaints made at each visit (Table 1).

The pregnant woman assumed a semi-Fowler position during the acupuncture and moxibustion treatment to prevent the development of supine hypotension syndrome and the moxa-needling treatment was performed in the flexed knees position.

Moreover, we instructed the patient to treat herself with moxibustion daily on the left and right SP6 for 5 minutes each using stick moxa. The patient reported to have performed the self-moxibustion daily.

At the fourth treatment the region around the left and right SP9 was slightly depressed, representing a state of deficiency, so that daily self-moxibustion treatment with stick moxa on the left and right SP9 for 5 minutes each was added.

For the moxa-needling we used 50 mm Seirin L-type needles with a diameter of 0.20 mm and 0.769 g portions of Kamaya moxa for moxa-needling formed into spheres with a diameter of 20 mm, that were then attached to the needle heads and burned. For retaining needles we used J-type Seirin needles with a length of 40 mm and a diameter of 0.16 mm.

The indefinite complaints were evaluated using the entries in a 5-stage, 40-item (Table 2) evaluation indefinite complaints questionnaire with numbers from 0 to 4 made by the patient herself before each acupuncture and moxibustion treatment.

The course showed that following the first visit the nocturia improved and the pollakisuria improved to achieve micturition intervals of 2 hours. After that the pollakisuria and nocturia did not recur during the pregnancy until delivery (see Figures 1-3).

Delivery was a natural childbirth and although there was copious bleeding during delivery, no iron medication was used and the patient was not unwell.

[Patient No. 2]

16-year old woman, primipara, senior high school student.

Chief complaint was correction of breech presentation. The gestational age at the first visit was 29 weeks and 3 days. Height was 153 cm, weight was 59 kg (weight increased by 7 kg from the 52 kg before pregnancy). The pregnancy had proceeded in breech presentation since the 25th gestational week. The pregnancy was otherwise uneventful.

During the first visit, chilling of the feet and edematous over a distance of about 7-8 cm above the ankles in a ring-like region were observed. Micturition frequency was once every hour and on 3-4 nights per week about 1-2 times per night. Treatment frequency until correction of the breech presentation was twice a week and after that once a week.

During the first visit, left and right SP6 were treated with moxa-needling and direct moxibustion with half-rice grain sized cones on BL67 for the

correction of the breech presentation. Before the second treatment abdominal palpation showed a cephalic presentation of the fetus, but because the patient requested continued acupuncture and moxibustion treatment until delivery for the sake of physical conditioning, a basic treatment of bilateral moxa-needling at SP6 with 3 cones of moxa and needles retained in a selection of appropriate acupoints for the complaints at that particular visit (see Table 3) was administered.

The same types of needles and moxa as used for patient No. 1 were employed and for the direct moxibustion the Yamasho moxa "Nippon Ichi Ogonzan" was used.

The indefinite complaints were evaluated like for patient No.1 during each treatment.

The course showed that micturition intervals had lengthened to 2-3 hours and rising during the night for micturition occurred only once during the 3-day period from the first to the second treatment. From the second treatment the course preceded without pollakisuria and nocturia (see Figures 1-3).

Delivery was a natural childbirth and the postpartum course was uneventful.

[Discussion]

During the individual stages of pregnancy various indefinite complaints may develop in pregnant women and tend to change in conjunction with alterations in physical condition. Common self-care of indefinite complaints include aerobics, swimming, yoga and similar exercises, while belts are used for splinting the pelvis in case of low back pain<sup>1)</sup>.

Both pollakisuria and nocturia are classified as indefinite complaints and according to Shimada et al.<sup>3)</sup> report, pollakisuria and nocturia are ranked top among indefinite complaints developing during the first and second trimester, while ranking top during late gestation with an incidence of 95.4%. Thus, almost all pregnant women experience pollakisuria

and nocturia (see Table 4). That report, however, does not mention nocturia.

Regarding the reason for the easy development of pollakisuria is considered to be that the "enlarging uterus among the physical changes during pregnancy presses on the bladder and flattens it in anteroposterior direction. That is why a micturition desire occurs so easily." <sup>4)</sup> Also, regarding kidney function<sup>4)</sup> "the glomerular filtration and blood plasma flow increase during pregnancy, so that the glomerular filtration reaches by the 16<sup>th</sup> gestational week a peak that is about 1.5 times higher than in the non-pregnant state, subsequently maintaining this high value until late gestation. The kidney blood plasma flow reaches a peak by the 15-16<sup>th</sup> week too, but there is no agreement among reporters, since some reports describe a decrease towards late gestation, while other reports state the level is maintained."

Incidentally, Hirose<sup>5)</sup> noted regarding the correlation between pollakisuria and sleep disorders in the various pregnancy periods that "the frequency of nocturnal urination had markedly increased in patients with sleep disorders during the first, second and third trimester of the pregnancy. (omission) Nocturia is a conceivable cause for sleep maintenance disorders." Sleep disorders during late gestation may cause accumulation of fatigue and could thereby possibly influence delivery. Regarding fatigue during gestational periods Yano<sup>6)</sup> pointed out, that this fatigue might be a non-obstetrical etiologic factor for uterine inertia. Moreover, uterine inertia may easily develop into protracted labor and invasive measures at the time of delivery could affect the puerperal period. Thus, pollakisuria and nocturia during pregnancy may affect the QOL during pregnancy and the delivery, therefore representing important symptoms for the expecting mothers that should be alleviated.

On the other hand, there seem to be no reports about the effectiveness of acupuncture and

moxibustion treatment for pollakisuria and nocturia in pregnant women, but among the reports about lower urinary tract disorders, Tomita et al.<sup>7)</sup> noted that "according to RTCs warming moxibustion treatment for nocturia led to a significantly decreased number of nocturnal micturitions." Again, the mechanisms behind the marked effectiveness of the acupuncture and moxibustion treatment are not clear, but careful inspection of the abdomen of the pregnant woman after an acupuncture and moxibustion treatment shows marked changes (Figure 4-1, Figure 4-2). The entire abdomen seems to be becoming firmer, the position of the protruding uterus comes to lie higher and the bulge above the inguinal and suprapubic regions decreases. These findings suggest that acupuncture and moxibustion treatment exerts some influence that is mediated via the autonomous nervous system, causing changes in the position of the uterus and bladder, leading to variations in the bladder capacity, surmised to cause the alleviation of the pollakisuria.

Collecting data pertaining to improvements of pollakisuria and nocturia in pregnant women through acupuncture and moxibustion treatment represents a task for the future. The clarification of changes in uterine position and size as well as bladder capacity before and after acupuncture and moxibustion treatment represents yet another task.

#### [Conclusions]

The results indicated that acupuncture and moxibustion treatment is effective for pollakisuria and nocturia in pregnant women.

《References》

1. Treatment Guidelines for Overactive Bladder, Neurologic Bladder Society: 2009
2. Midwife skills for gestation periods, support of minor troubles, Perinatal Care, Summer Special Edition 2010: 54-58
3. Mieko Shimada, Haruko Niikawa: Current situation about minor troubles in pregnant women; Midwife 2011; 65 (3): 42-45
4. Takeshi Maruo, Takashi Okai: Standard Obstetrics and Gynecology; Tokyo, Igaku Shoin, 2008: 312-313
5. Kazuhiro Hirose, Shinichi Hoshi, Shuichiro Shirakawa: Longitudinal study about sleep disorders in pregnant and parturient women; Acta Obstetrica et Gynaecologica Japonica, 2002; 53 (2): 527
6. Tadashi Yano: Inertia Uteri; Tadashi Yano Edition of the Illustrated Guide to Acupuncture and Moxibustion Techniques; Tokyo; KOBUNDO Co.,Ltd.; 2012:344-350
7. Kenichi Tomita, Hiroshi Kitakouji, Hisashi Honjou, Masahiro Nakao: The effects of warming moxa on nocturia - investigation of a randomized controlled study; Journal of the Japan Society of Acupuncture and Moxibustion, 2009, 59 (2): 116-124

## Clinical Report 2 (Kampo Medicine)

### *Headache 3*

Mihoh Koga, M.D., Kampo Specialist

Research Assistant of Division of Clinical Pharmacology  
and Therapeutics and Division of General Medicine  
Jikei University School of Medicine

< Migraine, chronic continuous dysentery, yang deficiency, blood deficiency, blood stasis, liver qi stagnation >

Case (8): age 35 years, female, pharmacist, visited in March XY

Chief complaint: headache, sense of coldness of the lower half of the body, constipation, insomnia, easy susceptibility common cold, menorrhagia

Present illness:

Since her high-school days she developed every afternoon a headache that radiated to the left temporal region and required in severe cases the use of commercial analgesics. Recently she has been under the impression that the effectiveness of the analgesics has decreased. Severe headaches occurring once or twice a month require that she takes to bed, but they seem not to be related to her menstrual cycle. Although she has sufficient energy, she lacks physical strength. When tired, the muscles of the right upper arm produce a dragging pain, after which she reports the development of pharyngeal pain and fever. She has been constipated since her youth with one bowl movement every 10 days, or 1-2 bowl movements per week, if she took 1.5 times the normal amount of senna. Serious of character. Previously the use of *tokakujokito* for constipation caused the onset of severe dizziness and headaches.

Findings upon first visit:

Average height and weight with a normal body temperature of 36.3°C, little facial expression and speech as if suppressing her voice. Menstrual cycle of approximately 30 days, containing blood clots, menorrhagia. The pulse was thin and wiry, the tongue dark red and moist with a white fur, engorged sublingual veins, presence of fullness, tenderness or discomfort of the hypochondrium, chilling of the

epigastric region and tenderness on the left side of the naval.

Pattern: yang deficiency, blood deficiency, blood stasis, liver qi stagnation

First prescription: *tokishigyakukagoshuyushokyoto*  
Course:

The prolonged use of senna had led to chronic continuous dysentery and thereby induced blood stasis, while the liver qi stagnation was considered to prevent recovery. First, in order to relief the chronic continuous dysentery *tokishigyakukagoshuyushokyoto* was chosen, the use of senna for the constipation discontinued and instead Mashiningan once daily prescribed. This also improved the effects of analgesics used for the treatment of the headache, the severity of which gradually decreased, but since their frequency did not change, they still caused anxiety. Bowl movements improved to once every three days.

Taking the formula prescription over a period of half a year improved the sense of coldness of hands and feet, but the sense of exhaustion did not even improve with sleep and increasingly strong stress at work influenced also the pulse and abdominal findings, so that the prescription was switched to *yokukansankachinpihange*. Although the coagula in the menstrual blood disappeared and the menorrhagia improved, the patient suffered from severe headaches during the latter half of the menstrual cycle. Prescription after half a year: *shakuyakukanzoto* (each 2/3 of the dose).

After one month of treatment improvements of both the frequency and severity of the headaches were observed and after half a year the use of analgesics had become unnecessary and headaches were alleviated with single doses of *tokishakuyakusan*. By then the patient had comfortable bowl movements even without the use of Mashiningan once every 1-2 days.

### ■ Discussion

#### 1. "Pain"

In Kampo medicine pain is considered to have the following causes. "For the activities of mind and body qi, blood, and body fluids must circulate without

excess or deficiency. However, when there are deficiencies in the functions of qi, blood, and body fluid or a stagnation of their flow preventing their even distribution pain will result." This may be caused by influence of the six excesses or seven emotions; exhaustion, unwholesome dietary habits and similar factors, variations in the body's internal environment or disorders caused by exogenous pathogenic factors.

The clinical aspects of headache too have to be considered depending on the pathologic condition. In other words, there are three different views of the condition, including the questions A) Is there a stagnation of qi, blood or body fluids?; B) Is there maybe a deficiency of qi and blood or yin essence or else nutrients (nourishment)?; and C) Are there any mental factors leading to aggravation of the pain? These different aspects A, B and C do influence each other mutually and are often observed simultaneously. It is important to ascertain the real nature of the pathologic condition, but depending on the symptoms this may often prove to be difficult.

Yet, among these aspects the one mentioned and b) "presence of deficiency" causes pain and is therefore called "deficiency pain". Qi and blood mutually generate each other and supplement shortages, so that states of deficiency continuing over extended periods of time will eventually result in deficiencies of both qi and blood. For this reason pain that has become chronic, will also become refractory to treatment and the deterioration of the bodily environment and the ensuing insufficiency in pharmacokinetics may then possibly result in a decrease of the efficacy of analgesics.

Also, "chronic diseases inevitably are accompanied by blood stasis" and it is said, that "in the presence of blood stasis, treat this first". Therefore, in cases of chronic headache it is important to take blood stagnation = blood stasis also into consideration.

## 2. Types of headache and pathologic condition

Here I would like to discuss, adding a few comments about the individual cases, the types of headache and their correlation to the patterns.

### 1) Tension headache

Tension headache is characterized by a sense of tightening of the head with a heavy, dull kind of pain that continues typically on a daily basis and which is usually triggered by increased muscle tension or stress.

The heavy, dull pain is characteristic for a stagnation of dampness. It also resembles this condition in that it is alleviated by massage etc. The generation of dampness due to spleen deficiency is considered to be one of the distal factors and illustrated in the cases (1), (2) and (3). Improvement of all symptoms after administering *bukuryoin* to patients visiting our clinic with headache and chronic gastritis is something we experience on a rather regular basis in our outpatient department. Again, a state of muscle tension can be considered to represent a state of malnutrition for the muscles themselves and considering that the spleen is supposed to nourish the skin and underlying flesh, relaxation of the muscles is an essential aspect of the treatment and suggests that there is some correlation between the state of the health of spleen and stomach on the one hand and tension headache on the other hand. Among these patients in particular case (2) was interesting, considering the fact, that the effective prescription for single use varied depending on with the presence of gastrointestinal symptoms.

Moreover, in cases of blood deficiency the reactivity towards the pain decreased and these patients characteristically presented often with a mild, but nagging and continuous pain.

This resembles the pain of tension headache. When like in case No. 3 the condition was based on anemia, or in case No. 4 where the condition was triggered by a pregnancy, a post partum or post-menstrual headache should be considered.



Case No. 5 is an example of qi stagnation caused by the stress after employment.

## 2) Migraine

Migraine is characterized by a throbbing pain occurring several times a months in form of attacks, associated with nausea, hypersensitivity towards light and sound and similar symptoms. Generally, compared to tension headache, the pain is severe.

Regarding severe pain there is a marked correlation with excess patterns. In cases of excess of the blood this manifests as blood stasis, while qi excess gives rise to qi stagnation or rebellious qi. On the other hand, fluid in these cases often occupies the third space and causes quietly concealed infiltration. Therefore, it is considered that even in cases of excess there is no sudden rise in local internal pressure and thus severe pain. Naturally, if fluid were to be enclosed within cerebral ventricles or the capsule of surrounding tumors, it may come to excess condition in these restricted spaces producing severe pain. Also, the hyperesthesia's that often occur in conjunction with the migraine are a pathological condition in which the evil of an excess pattern is present and may easily imaginable trigger either locally or systemically a state of high tension, suggesting a correlation with the excess pattern.

Blood stasis is often responsible for locally fixed, stabbing or else lancinating pain, while qi stagnation often produces wandering pain that feels like stretching or swelling. In case No. 6 the "pain like being hit" is a form of lancinating pain often observed with blood stasis. The "pain as if a heavy stone lies inside" improved with treatment to regulate qi and thus is possibly related to qi stagnation. In this patient the treatment should probably have aimed from the beginning at expelling stasis and regulating qi.

In case No. 7 too blood stasis and qi stagnation induced symptoms were prominent and *tsudosan* proved to be markedly effective. The persistent constipation required combination therapy with

*daibotanpito*, indicating that the nature of the headaches and constipation as well as the mental condition are important criteria for the treatment. Otherwise, I often experienced that during the therapeutic course following treatment of malignant tumors or treatment of a collagen diseases and the like conditions migraine may develop and treatment were found to be markedly effective in cases complicated by agitation and constipation.

The cold deficiency of spleen and stomach induced by prolonged use of senna in case No. 8 led to the development of a yang deficiency. Since "Blood circulates by being warmed" coldness obstructs the circulation of blood. For chilling of the hands and feet in the presence of chronic continuous dysentery and blood stasis in the pelvis *tokishigyakukagoshuyushokyoto* is very effective. Moreover, circulation of the blood also requires the flow of qi. The stress at work impeded recovery from the blood stasis further and thus I focused on regulating qi once the coldness had been alleviated, but the treatment still required the use of *tokishakuyakusan* with its blood stasis expelling action to supplement the blood.

## ■ Conclusion

Among the forms of chronic headache tension headache and migraine are frequently observed in the Kampo outpatient practice. I presented a few cases and discussed them briefly. I also offered one opinion pertaining to the characteristics of both conditions and their pathological conditions in the Kampo medical sense.

Combination of western medical diagnosis with TCM theory appears to be useful for providing the "individualized therapy" mentioned at the beginning recommended by the AHA. Integration of TCM theory into the therapy is considered to contribute also to the development of western medical care.

## Front Line of Kampo Pharmacology

### *Review of Research Presentations on Kampo Medicines 5*

Toshiaki Makino, Ph.D.

Associate Professor, Dept. of Pharmacognosy

Graduate School of Pharmaceutical Sciences

Nagoya City University

---

This series will introduce the recent research and studies relating to Kampo medicines presented at academic conferences. This installment of the series provides presentations made at The 28th Annual Meeting of Medical and Pharmaceutical Society for WAKAN-YAKU held in Toyama on August 27-28, 2011.

### Quality control of crude drugs and their discrimination

Doui, et al. of Kanazawa University have clarified that when Ginger is heat-processed, the content amounts of shogaol and gingerol, which are the ingredients that change by processing, correlate with the values measured by a colorimeter based on the property that the color of heat-processed ginger changes depending on the heating method used and/or the heating time applied. They reported that colors can be used for quality evaluation.

### Pharmacokinetics of crude drug components

Ochiai, et al. of Hoshi University reported that they have investigated the absorption of hydroxy- $\alpha$ -sanshool ( $\alpha$ -HS) and hydroxy- $\beta$ -sanshool ( $\beta$ -HS) contained in *Zanthoxylum* fruit (Japanese pepper) in the digestive tract with the finding that  $\alpha$ -HS becomes the ground substance or matrix of the excrete type transporter and the digestive tract absorption is in the state of being controlled, and when daikenchuto (Major Middle-Strengthening Decoction) which includes *Zanthoxylum* fruit is used, the transporter becomes inhibited and the digestive tract absorption is promoted.

Horii, et al. of Kracie Pharmaceutical, Ltd. reported that they have investigated differences between the extract form and the liquid form of kakkonto (*Pueraria* Decoction) in the digestive tract absorption of ephedrine and pseudoephedrine contained in kakkonto with the findings that there were no differences in the absorption but plasma concentration-time curves were equivalent.

### Basic pharmacological study on crude drugs and Kampo formulas

Fujikawa, et al. of Fukuoka University reported that they have observed that in a cerebral ischemia-reperfusion-induced rat model, spatial memory disturbance improved by continuous oral administration of yokukansan (Liver-Inhibiting Powder), which further enhanced the releasing amounts of acetylcholine from the hippocampus, inhibiting neural cell death.

Nakada et al. of University of Toyama reported that they have used kamikihito (Modified Back to the Spleen Decoction) in a Alzheimer's disease model in transgenic mice that had excessive expression of mutant type human genes neuron-specifically induced, with the results that the ability of object-recognition memory significantly improved with a significant decrease in  $\beta$ -amyloid deposition in the hippocampus.

Ouchi, et al. of University of Toyama reported improvements in carelessness-like behaviors in mice exposed to isolation-rearing stress by the continuous administration of sansoninto (Wild Jujube seed Decoction). And they suggest that sansoninto possibly has effects on attention deficit hyperactivity disorder (ADHD).

Kitamura, et al. of University of Toyama reported that they have evaluated the actions of Kampo medicines for neuropathic pain, a side-effect of the

anticancer drug paclitaxel or vincristine, with the findings that shakuyakukanzoto (Peony and Licorice Decoction) and goshajinkigan (Life-Preserving Kidney-Qi Pill) are very useful.

Yoshihisa, et al. of University of Toyama observed that keishibukuryogan (Cassia Twig and Tuckahoe Pill) inhibited the production of inflammatory cytokines when lipopolysaccharide (LPS) was induced to activate in human dermal endothelial cells, suggesting that this formula is effective for microvascular inflammation in patients with dermal inflammatory diseases.

Tamiya, et al. of Osaka City University observed that the administration of tokiinshi (Angerica Decoction, Antipruritus) yielded an increase in the water containing of the stratum corneum and a significant decrease in trans epidermal water loss, suggesting the possibility of this formula to revitalize the turnover time of the stratum corneum slowed down with age and to improve the moist-retention ability and the skin barrier function.

Aburada, et al. of Hoshi Pharmaceutical University observed that in the mice fed the diet containing the extracted matters from gypsum, the expression of aquaporin 3 mRNA in the skin increased. They also observed similar effects in the mice fed CaSO<sub>4</sub>, a main ingredient of gypsum.

Namaki, et al. of Gifu Pharmaceutical University reported that maoto (Ephedra Decoction) inhibits airway inflammation provoked by the activation of toll-like receptor ligands in the mouse trachea.

Tachi, et al. of Nagoya City University observed that bofutsushosan (Divaricate Saposchnikovia Miraculous Powder) controlled Niemann-Pick C1-like protein responsible for the absorption of cholesterol in the small-intestinal epithelial cells.

They found the crude drugs of Ginger and Platycodi Radix have the activity, suggesting that bofutsushosan inhibits the absorption of cholesterol while eating

Bai, et al. of Nagoya City University administered shichimotsukokato (Seven Herbs Decoction For Hypertension) to 5/6 nephrectomized rats and observed it had no effects on renal functions but produced a significant improvement in renal hypertension, explaining this improvement mechanism where dimethylarginine dimethylaminohydrolase (DDAH) is induced, lowering the concentration of asymmetric dimethylarginine in blood.

Chiba, et al. of Meijyo University administered juzentaihoto (Ten Strong Tonic Herbs Decoction) to hapten applied mice and then removed and transferred their lymphnodes into naïve mice, which caused the inflammatory activity to appear, reporting that juzentaihoto has the action of inducing regulatory T cells.

Hoshina, et al. of University of Toyama reported that in vitro, ogikenchuto (Astragalus Middle-Strengthening Decoction) has the ability to enhance presentation of antigen when dendritic cells are sensitized by ovalbumin, suggesting that the formula may be useful as an adjuvant for oral vaccines. Likewise, Yamada, et al. of University of Toyama reported on the same activity of juzentaihoto (Ten Strong Tonic Herbs Decoction) and their successful isolation of its effective ingredient of 1,2,3,4,6-penta-O-galloyl- $\alpha$ -D-glucose contained in Paeoniae Radix.

Fukui, et al. of University of Tokushima reported that the extracted matter from Sophorae Radix inhibits the production of interleukin-4 released from rat basophilic leukocytes and they have isolated the effective ingredient of trifolirhizin.

Hyuga, et al of Kitasato University reported that maoto (Ephedra Decoction) inhibits the ability-to-move of human breast cancer cells stimulated by the hepatic growth factor and Ephedra Herba contained in the formula causes the inhibition of tyrosine kinase.

Yamada, et al. of Yokohama City University observed increased flows of the intraorbital posterior ciliary arteries and extraocular arteries in rabbits after the administration of shosaikoto (Minor Bupleurum Decoction), suggesting that this formula is useful for obstructive [angitis](#) in patients with various types of cancer.

Yamaguchi, et al. of Fukuoka University reported that yokukansan (Liver-Inhibiting Powder) improves anxiety-like behaviors in rat cerebral ischemia-reperfusion injury models, explaining that the improvement is caused by the 5-HT<sub>2A</sub> receptor mediated mechanism.

Iwaoka, et al. of Hyogo University of Health Sciences removed and cultured rat dorsal root ganglia with an addition of Euodiae Fructus thereon and observed the increasing of Ca<sup>2+</sup> concentration in neurons, suggesting that the analgesic effect is permitted by the mechanism of mediating TRPV1 activation action. They also reported they have isolated the effective ingredient of evodiamine.

Oda, et al. of University of Toyama liberated various crude drugs for the cells having TRP channels expressed forcibly and observed the action of activating TRPV1 in Rhubarb and isolated the effective ingredient of senidine, which, they found, was unrelated to the purging effect of Rhubarb.

Takayama, et al. of Fukuyama University investigated mechanisms of the purging action of daiokanzoto (Rhubarb and Licorice Decoction) in mice with the findings that liquiritin contained in

Licorice promotes the action of sennoside A and individual types of antibiotics significantly inhibit the purging action of sennoside A.

Endo, et al. of Kitasato University administered rikkunshito (Six Gentlemen Decoction) to mice and observed an increased activity of gastric motility and emptying in healthy mice and, on the contrary, an inhibiting effect in food-deprived mice, reporting that rikkunshito has complex mechanisms with multiple points of action.

Jo, et al. of University of Toyama reported that peripheral edema in rats induced when pioglitazone is administered can be improved by the use of goreisan (Poria Powder with Five Herbs).

Ito, et al. of Kitasato University have clarified the antidepressant action of kososan (Cyperus and Perilla Leaf Powder) using a stress-induced depression-like mouse model, reporting that the regulation of orexin and neuropeptide Y nervous system network in the brain is involved in the mechanism. Nagai, et al. further made proteome analysis of mouse serum and observed a decreased level of complement C3 due to kososan. Okuda, et al. conducted proteome analysis of hippocampi of the mice and reported that tropomyosin  $\alpha$ -1 chain can be recovered.

Yamamoto, et al. of University of Toyama isolated CD4<sup>+</sup> Tcells, which recognize OVA, from mouse lymphatic tissues and showed that kakkonto (Pueraria Decoction) inhibits the proliferation of cells when stimulated with OVA. They reported that the action of improving food allergies can be expected in kakkonto.

Kigasawa, et al. of University of Toyama clarified that in mice, byakkokaninjinto (White Tiger plus Ginseng Decoction) inhibits the differentiation of femoral bone marrow cells into mature dendritic

cells and reported that this formula has the action of immune regulation.

Nishimoto, et al. of Kitasato University analyzed active ingredients of immunoregulatory factors induced by having hochuekkito (Middle-Reinforcing and Qi-Benefiting Decoction) act on rat duodenum-derived epithelial cell lines and then isolated four types of sugar chains with a molecular weight of 37,000-40,000/each.

Kimura, et al. of University of Toyama evaluated curative effects of kigikenchuto (Angelica Root Middle-Strengthening Decoction) in a rat model with pressure ulcers induced by applying repetitive pressure, observing the enhanced growth of new blood vessels and increased actin-positive myofibroblastic cells. They suggest that the formula is potentially useful for pressure ulcer treatment.

Yanagihara, et al. of Osaka City University reported that hochuekkito (Middle-Reinforcing and Qi-Benefiting Decoction) improves skin hazards in hairless mice caused by ultraviolet radiation through the antioxidant action of the formula.

## Medical History in Japan

*Historical Significance of the Standardization of Acupoint Locations”, the Second Japanese Acupoint Committee (4) “Detailed Guide to the Location of Acupoints” from the classics to the WHO standardization”, pp411-422, Tokyo, Ishiyaku Publishing, June 2009 (partially revised)*

Makoto Mayanagi

Graduate School of Humanities  
Ibaraki University

(continued from KAIM Journal vol.6 no.1, no.2 and no.3)

### 3. Spread of metal needles and increase in the number of acupoints



**Figure 3 Silver needle (the two on the left) and gold needles (the four on the right)**

The excavation of the Mawangdui medical texts revealed, that the meridian concept had been used for therapeutic purposes prior to the second century BC, using mainly moxibustion. However, as the centuries passed by, this too changed. From the early Han period in the second century BC the regular use of iron vessels in China began to replace the former use of bronze vessels. In the late Han period of the first century filiform iron needles also seemed to have spread. Also, for the royalty and aristocracy gold and silver needles were used.

Figure 3 shows replicas of gold needles (the four on the right) and silver needles (the two on the left) that had been buried in 112 BC in the Han dynasty tomb of Mancheng 滿城漢墓, along which a modern Chinese long needle (12 cm) is placed for comparison. These artifacts have been excavated from the tomb of Liu Sheng, Prince Jing of Zhongshan, member of

a family from the early Han dynasty along with vessels for making decoctions that had the characters "medical craft" engraved on them [6]. Judging from both material and form of these gold and silver needles allows to rule out that they were sewing needles and they are currently the oldest metallic needles for use on the human body in existence. However, they are not as thin as the filiform needles and could probably only be inserted to a depth of about 5 mm below the skin.



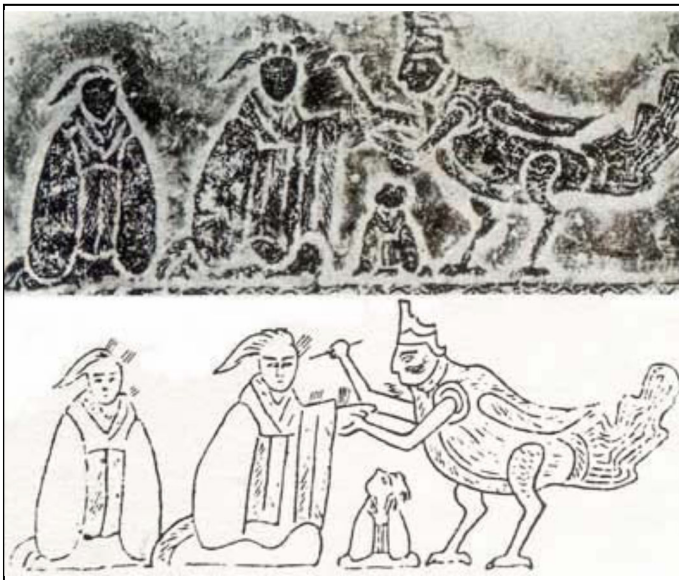
**Figure 4 Stone relief (second century BC)**

On the one hand, materials allowing to speculate about the acupuncture treatment include about 8 stone reliefs unearthed in Shandong province that had been decorating the tomb walls [7]. All of which date back to the first half of the second century BC, where a creature with a human face and a bird's body takes a hand of a person facing it, while it holds something up towards the person with the other hand (Figure 4, 5). On these stone reliefs the creature with a human face and a bird's body does something to the persons, all of whom have long flowing head hair. Appearing with not formally tied hair is considered to be a characteristic of sick people. In Figure 4 a crow like bird is sitting on the wings of the creature with a human face and a bird's body. This bird is said to be a magpie and the Chinese name for magpie is "鵲" = Que. Moreover, what the creature with a human face and a bird's body is holding over the sick person is big and thick and

therefore considered to be a stone needle that were used to drain pus etc.

By the way, in the "Historical Records" (Shiji) there is description of the legendary famous doctor "扁鵲" = Bian Que. The first character of the name "扁" and the first character in the term for stone needle = "砭" = bian had in the past and today still have the same pronunciation. It may thus be surmised, that stones (bian) were used und the magpie (que= 鵲) was a symbol for a bian que called group of physicians. The motif depicted on these stone reliefs, where Bian Que takes the hands of the sick people is conceivably a symbolic representation of the pulse diagnosis. Pulse diagnosis is a major characteristic of the Bian Que school and it has presumably been recognized at that time. Further, as a reproduction of the rubbed copy shown in Figure 5 unearthed in the same Shandong province shows, there are also stone reliefs depicting the retaining of thin metallic needles. It can be deducted from these materials that metal needles had spread throughout the entire region of the Shandong province by the first half of the second century BC. Considering the migration of people at the time and the transmission of knowledge, it can be inferred, that these had been transmitted to a considerably large area throughout China.

In the original form of the "Sun Wen" and "Ling Shu" of the first century a unification of the 12 regular meridians, the conception and governor vessels as well as the 365 acupoints was attempted, but in practice the number of acupoints was only about 130 points. Yet, by setting the ideal number to 365 points and the spread of metal needles the number of acupoints doubtlessly increased rapidly thereafter. However, because determination of individual point locations varied with period, school and region, the occurrence of differences was inevitable. The recognition that the meridians have a certain course and that there new extraordinary meridians probably led to confusion on a theoretical level.



**Figure 5 Stone relief (first half of the second century BC) rubbed copy, reproduction**



Global Tech Communications  
streamlines communication among  
our client companies by linking with the  
projects and generating returned profits.

### **Translation and Localization Services**

Our mission is simply to help our clients grow their globalizing business and gain profits by providing high quality translation deliverables and added values with our unconventional and creative ideas. Our highly competent and experienced staff and our qualified freelance translators together provide the best solution to satisfy our clients' expectation in area of Information Technology, Financial market, Medical & Pharmaceutical market, Automobile, Legal, Patents, etc.

Our language pairs cover more than 50 languages for our clients.

### **Consultation Services**

We offer the focused consulting services that meet the need of each client company for their business development in the borderless markets.

Our clients vary in size and field, and are offered with various consultation proposals. We search the issues and the opportunities that confront our clients, and provide the best support in developing business systems that generate the profit to our clients. We further extend our consulting services in various markets as we started in Asian countries.

#### **Global Tech Communications, Inc.**

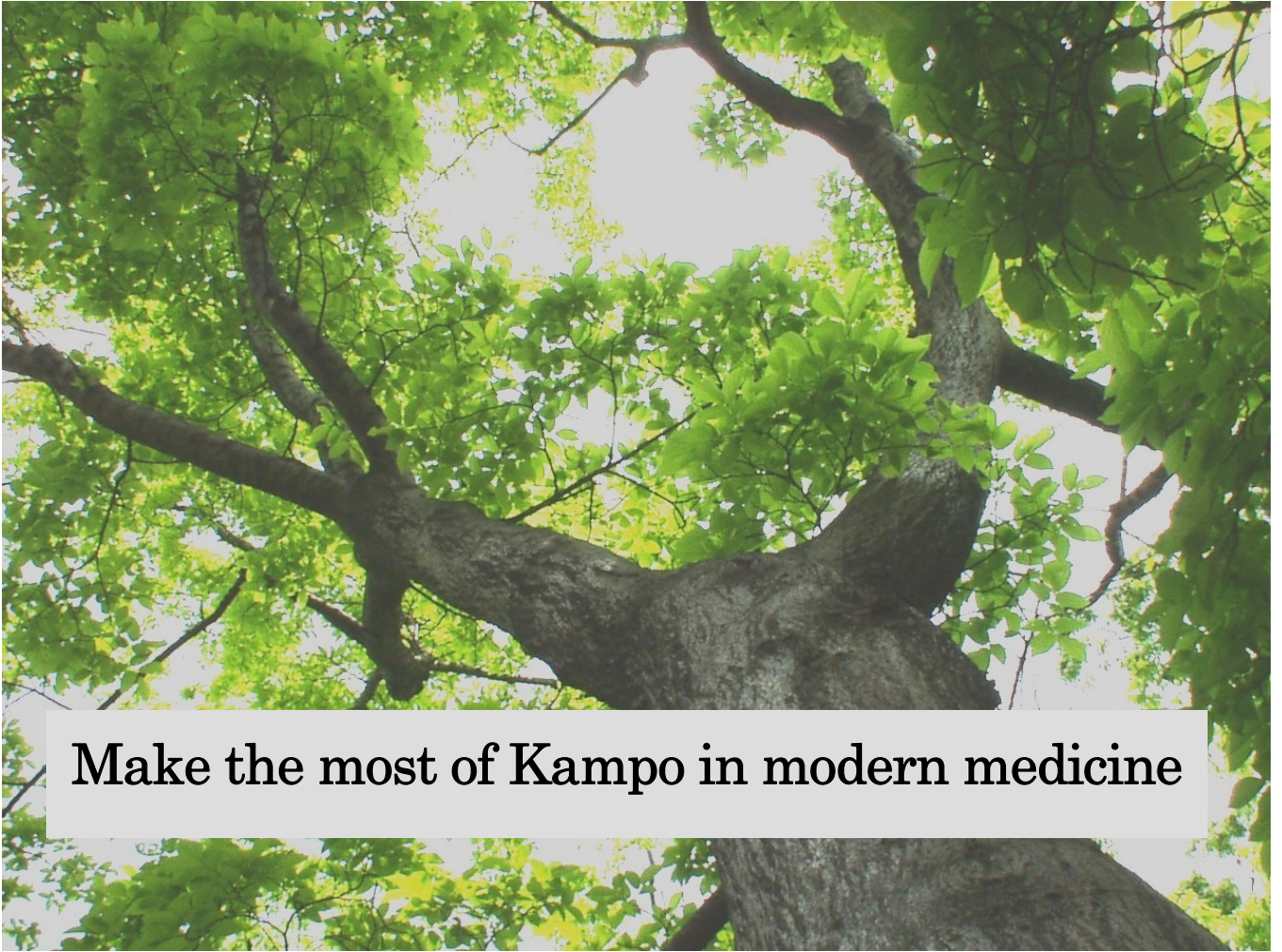
Nakano SUNPLAZA 9F

4-1-1 Nakano, Nakano-ku, Tokyo 164-8512, JAPAN

TEL: +813-5942-3038 FAX: +813-5942-3601

URL: [www.globaltech.jp](http://www.globaltech.jp)





## Make the most of Kampo in modern medicine

Foundation: 1905

A century of tradition —————

We are a manufacturer consistently controlling the entire process from the import of crude herbs to the manufacture of Kampo extracts and as such have contributed to the development of Japanese Kampo.

We sincerely hope to continue in the future with our contribution to modern medicine through "Kampo".

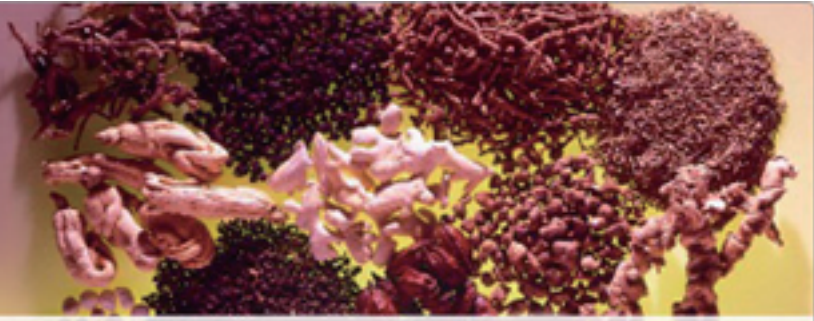


**オースギ**

---

OHSUGI Pharmaceutical Co., Ltd.  
1-1-2 Tennojicho, Minami, Abeno-Ku, Osaka, Japan  
Phone: +81-6-6693-3301

*Dedication to Crude Drugs*  
SINCE 1928



Tochimoto wishes ● ● ●

to be a partner of a wide range of industries from the pharmaceutical to the food and the beauty by providing natural and herbal medicines of good quality.

*The crude drugs like many other creatures on earth are raised by bountiful NATURE.*

*Humankind earns as well grace from Mother Nature and is blessed as a member of natural world.*



## **PROFILE** *of* **TOCHIMOTO**

Since Tochimoto was appointed as a Japan-China friendship trading firm in 1963, we have expanded our business overseas, mainly with China.

We import a variety of quality-controlled natural resources from all over the world for maintaining wellness.

**TOCHIMOTO TENKAIDO CO., LTD.**

3-21 Suehiro-cho, Kita-ku, Osaka 530-0053, JAPAN

[www.tochimoto.co.jp](http://www.tochimoto.co.jp)

# Kracie

KEEPING PACE WITH THE TIMES,  
MILD MEDICAL TREATMENT FOR HUMAN



twice or three times a day, possible to select



We wish you a healthy living

For more information, please contact

**Kracie Pharmaceutical, Ltd.**

20-20, Kaigan 3-chome, Minato-ku, Tokyo 108-8080

<http://www.kampoyubi.jp>

Printed in Oct.2007



# My choice is SEIRIN

## What's yours?

For painless acupuncture treatments  
I always trust Seirin.

New patients are surprised by its comfort, and my  
regular clients ask for it by name.

### Exceptional Products.

Join the thousands of distinguished professionals who have counted on SEIRIN for over 30 years to provide the highest quality needles for you, and a painless experience for your clients.

