

Editorial

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Japanese Traditional Medicine Text (1) – Internal Medicine
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Front Line of Kampo Pharmacology

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Toshiaki Makino

Medical History in Japan

“Historical Significance of the Standardization of Acupoint Locations”, the Second Japanese Acupoint Committee (2)
Makoto Mayanagi

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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.

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Editorial

What can the East do for the West and What can the West do for the East in Oriental Medicine

Joseph Rudyard Kipling, who became the first Englishman in 1907 to earn the Nobel Prize for Literature (1865-1936), wrote a poem that begins “East is East and West is West, never the twain shall meet.” This phrase has been cited and discussed in cultural and many other areas.

Similarly, Oriental medicine and Western medicine shall never meet. In fact, as in the other real world, both can be reconciled. Then what is the best way for ideal coexistence between them? The answer is to help each other. For this, it is necessary for dialogue to take place between representatives of the nations and regions where Oriental medicine or Western medicine is available and the practitioners. I call on the people concerned to think of “What can the East do for the West and What can the West do for the East in Oriental Medicine.” Through this process, we will be able to create a path toward a new global world.

Oriental medicine, which was originated in ancient China and developed in China and its surrounding countries, is a traditional medicine. TCM in China was a versatile medicine embracing various concepts before the Chinese Revolution. Intrinsically, TCM included and includes a wealth of concepts and these concepts served as the driving force for its development. This is true of Japanese Kampo medicine and traditional Korean medicine in Korea.

Resources of Oriental medicine that the East can provide to the West are varied, ranging widely from knowledge, techniques, medicinal substances, tools, systems, hardware, and software. The East as recipient can freely adopt them.

However, the flow of resources should not be in one direction from the East to the West. The West that received varieties of information will be able to fully understand and reshape it that works for or suits to the West, like the people of Korea, Japan, and Viet Nam have done so for over a thousand years.

In the West, there may be plants similar to Chinese medicinal materials such as American ginseng in North America. Moreover, there may still be a lot of plants left unknown to the East, like the ones that were brought from distant lands of Europe, Persia, and India and came to be used in China.

The day will come when theories, techniques, tools, and medicines introduced into the West from the East develop into new forms in each land and their modifications are brought back to the East from the West.

At the time, Oriental medicine will become a truly global medicine.

Hiromichi Yasui
Japan Institute of TCM Research

Japanese Acupuncture - Current Research

Japanese Traditional Medicine Text (1) – Internal Medicine

Kenichi Kimura

Department of Health and Medical Care

Kansai University of Health Sciences

A Circulatory Organs

1. The present condition of Clinical Research in Foreign Countries

In this section, on the topic of circulatory organs, we will be reporting on the current situation and prospects for domestic Japanese clinical research on Acupuncture and Moxibustion research, especially with respect to Hypertension. Hypertension is known globally as one of several lifestyle related diseases, notably in Japan alone has at least 40 million hypertensive patients. Arteriosclerosis, which occurs as people age, contributes to the increased frequency of Hypertension in the elderly population. Currently, hypertension and its related complications accounts for 30% of medical costs for people over age 65. Because of the inevitably high percentage of elderly patients with hypertension, I often intend to use clinical acupuncture and moxibustion for these patients. Widely known as the silent killer, hypertension has relatively mild or manageable subjective symptoms but if these are left untreated, the patient may suffer a stroke, ischemia or renal insufficiency, life threatening complications caused by this risk factor. For this reason, the purpose of treatment for hypertension is not simply to lower high blood pressure, but also to maintain normal levels to prevent ischemia or stroke. Classification of hypertension include Essential Hypertension and Secondary Hypertension, lifestyle habits such as high intake of sodium or alcohol, stress, smoking etc., as well as genetics, constitute factors that clearly contribute to the disease process. As for treatment, there is the non-medical aspect of therapy that includes improving daily habits such as reducing sodium intake and weight loss, moderate exercise, prohibition of smoking, and limiting alcohol

consumption combined with medical interventions, including hypotensive agents such as pharmaceuticals controlling sympathetic nerve blockers (a β acceptor blocker, an alpha-adrenoreceptor blocker), which act on the renin-angiotensin system. Reducing renin secretion helps to reduce the heart-oxygen demand by reducing extracellular fluid volume. The side effects and complications associated with this type of pharmacological treatment protocol, not to mention the costs, means many patients cannot adapt to these medical treatments 2). For many of these patients, the low cost and elimination of side effects makes the alternative therapies of Acupuncture and Moxibustion rather appealing 3). Until now there has been a lack of scientific proof for the effectiveness of acupuncture treatment for hypertension because there have not been enough well designed randomized controlled studies (RTC) or case studies and long term case reviews 4,5).

However, recently, Europe, America and Korea have been performing large scale RCTs demonstrating the efficacy of acupuncture treatments for hypertension 6-8). In 2007, Germany conducted an RCT study on 160 low to middle range hypertension patients and report that acupuncture treatments effectively lowers high blood pressure. As a result, when compared to the sham acupuncture group, the acupuncture group experienced significantly reduced systolic and diastolic blood pressure during the 24 hour period immediately following the treatment. This reduction lasted 6 weeks, but, follow-up results, 3 months and 6 months post treatment, showed the acupuncture group's blood pressure had returned to pre-treatment levels 6). (Figure 1).

Further, Korean researchers performed double-blind RCTs on 41 patients with High Blood pressure levels above 120/80mmHg. Previously, America approved new guidelines for hypertension, defining systolic blood pressure to be 120-139mmHg and diastolic blood pressure to be 80-89mmHg. The Korean study showed that 8 weeks of regular acupuncture

treatments significantly contributed to decreases in blood pressure when compared to the results of the sham acupuncture group 7). The group concluded that regular acupuncture is beneficial as a remedy for hypertension. In contrast, an American RCT study of 192 hypertension patients was conducted 8). This study divided the subjects into three random groups: standard acupuncture, sham acupuncture and no treatment. All patients received a Chinese Medical diagnosis where an individualized set of acupoints was determined. Treatments were conducted regularly for 6-8 weeks. Compared to basal readings, all three groups showed reductions in diastolic and systolic blood pressure 10 weeks following the trials, however the difference between groups was not significant. Further, 12 months following the trials, blood pressure levels showed a trend of returning to pre-trial levels, so both the conclusion that acupuncture treatment is effective for hypertension and not long lasting for hypertension were reported. In recent years, Lee et al. 9), conducted a systematic review of interventions using acupuncture therapy to treat Hypertension. They selected 11 RCT reports that satisfied all the standard criteria and showed references not only to the slight efficacy of acupuncture treatments to reduce hypertension when compared to the control intervention, but also to equivalent effectiveness when compared to hypertensive medications. Unfortunately, because of small sample size, some qualities of the trial designs and some disagreement between results the researchers could not reach the conclusion that acupuncture is sufficiently effective to treat hypertensive patients. Additionally, concerning moxibustion treatment as well, Kim et al., conducted a systematic review of 4 RCTs that met standard criteria. Of the 4 reports, 2 used hypertensive medications as the only control group and did not find a significant difference between to the control and moxibustion treatment for reducing hypertension. The other 2 reports compared

moxibustion treatment to two controls, hypertensive medications and no treatment, and found a significant decrease in patient hypertension levels when comparing moxibustion treatment with no treatment. However, because of the low number of high quality RCTs, differing results between reports; and with respect to moxibustion treatment RCTs, the difficulty of establishing an appropriate control intervention, there is insufficient evidence to suggest that moxibustion is effective for hypertension.

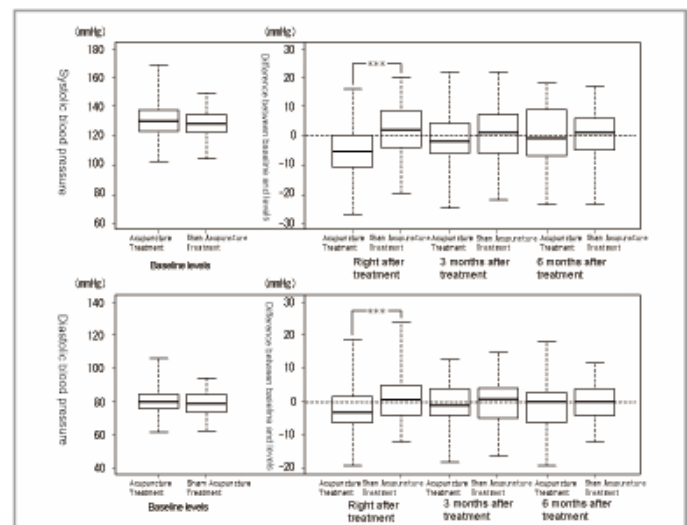


Figure 1 Effects of Acupuncture Treatment on Changes in Blood Pressure over a 24 Hour Period

Comparing significant drops in blood pressure levels between acupuncture and sham acupuncture subject levels immediately following the treatment: Systolic Blood Pressure (Upper Level), Diastolic Blood Pressure (Lower Level)(*** $p<0.0001$). Significant differences between the two groups were not compared 3months or 6 months following the trials.

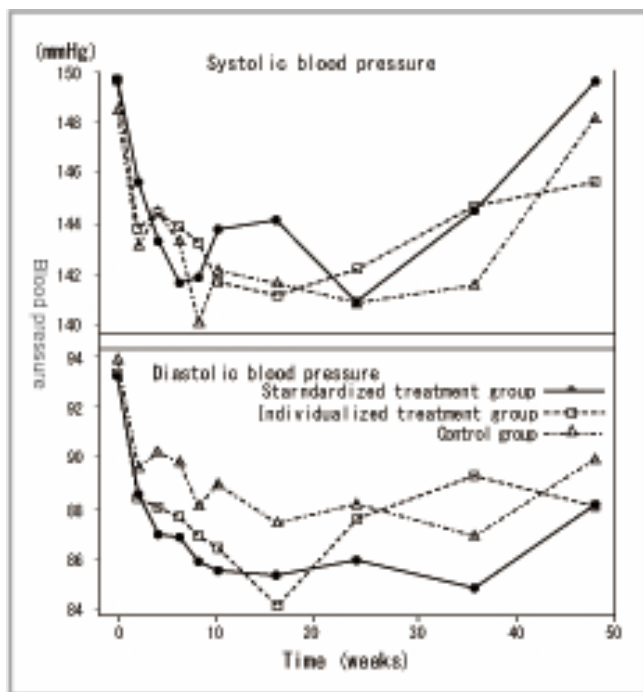


Figure 2 Changes in Systolic and Diastolic Blood Pressure due to Acupuncture treatment

Ten weeks following the trials, trends in decreased systolic and diastolic blood pressure were confirmed, however, significant differences were not confirmed between the three test groups: the individualized treatment group, the standardized treatment group and the control group. By 12 months following the trials, blood pressure levels had returned to pre-trial levels in all subject groups.

2. The current situation and outlook of Japanese Clinical Research

On the one hand, in Japan, most research is collected in clinical case compilations, and fewer documents, including RCTs and systematic reviews can be retrieved. Kou et al., 11) conducted a 2 month intervention on 15 elderly women (6 with normal blood pressure and 9 with hypertension). The purpose of these trials was to perform whole body acupuncture treatments. The subjects were asked to perform 24 hour ambulatory blood pressure monitoring (ABPM). According to cosine similarity, analyzing blood pressure levels during the day may

not elicit significant changes, however, using a cross comparison between day and night time standard values, known as a hyperbaric index, the researchers reported a significant decrease in blood pressure for the hypertensive group. Further, with respect to acupuncture treatment efficacy for hypertension, until now blood pressure readings were taken at random times before and after the treatments, but because acupuncture efficacy was not apparent using this method, it is now being suggested that 24 hours ABPM blood pressure recordings provide the potential for detailed analysis of blood pressure readings that were undetectable using only occasional readings.

Concerning the mechanism by which acupuncture can lead to decreases in blood pressure, basic research on intrinsic opioids within the brains of anesthetized rats activates of the inhibitory system of the sympathetic nervous system, suggesting the involvement of serotonin, nociceptin, GABA etc. Further, using an animal as a model with renal hypertension, this group treated St 36 (足三里) with electro-acupuncture causing acceleration of carbon dioxide production, blood vessel dilation and a reported decrease in blood pressure 13)

In the future, the themes of clinical research utilizing acupuncture and moxibustion for the treatment of Hypertension will necessarily need to focus not only on effectively lowering blood pressure, but also relieving the numerous complaints and symptoms that accompany hypertension. Further, as has been pointed out, hypotensive medications have side effects, interactions with other drugs and limits to their applicability so we consider combining pharmaceuticals with acupuncture and moxibustion in an effort to create a synergistic effect, reducing the amount of medicines required for effectiveness to be an important area of investigation.

References

- 1) Japanese Society of Hypertension and Hypertensive Treatment Guidelines Committee: Hypertension Guidelines 2009, Life Science Printing, Tokyo, 2009
- 2) Shaw E, Anderson JG, Maloney M, et al.: Factors associated with noncompliance of patients taking antihypertensive medications. *Hosp Pharm* 30: 201–203, 206–207, 1995
- 3) Wood MJ, Stewart RL, Merry H, et al.: Use of complementary and alternative medical therapies in patients with cardiovascular disease. *Am Heart J* 145: 806–812, 2003
- 4) Huang H, Liang S: Acupuncture at otoacupoint heart for treatment of vascular hypertension. *J Tradit Chin Med* 12: 133–136, 1992
- 5) Chiu YJ, Chi A, Reid IA: Cardiovascular and endocrine effects of acupuncture in hypertensive patients. *Clin Exp Hypertens* 19: 1047–1063, 1997
- 6) Flachskampf FA, Gallasch J, Gefeller O, et al.: Randomized trial of acupuncture to lower blood pressure. *Circulation* 115: 3121–3129, 2007
- 7) Yin C, Seo B, Park HJ, et al.: Acupuncture, a promising adjunctive therapy for essential hypertension: a double-blind, randomized, controlled trial. *Neurol Res* 29: 98–103, 2007
- 8) Macklin EA, Wayne PM, Kalish LA, et al.: Stop Hypertension with the Acupuncture Reaserach Program (SHARP): results of a randomized, controlled clinical trial. *Hypertension* 48: 838–845, 2006
- 9) Lee H, Kim SY, Park J, et al.: Acupuncture for lowering blood pressure: systematic review and meta-analysis. *Am J Hypertens* 22: 122–128, 2009
- 10) Kim JI, Choi JY, Lee H, et al.: Moxibustion for hypertension: a systemic review. *BMC Cradiovasc Disord* 10: 33, 2010
- 11) Seiki Kou, Chu Yano: Excerpt from, Ambulatory Blood Pressure Monitoring (AMBM), “The Efficacy of Acupuncture for Geriatric Blood Pressure”. *Nichiyu Journal of the Specialist of Climate Physics Society* 70: 155-164, 2007
- 12) Li P, Longhurst JC: Neural mechanism of electroacupuncture’s hypotensive effects. *Auton Neurosci* 157: 24–30, 2010
- 13) Kim DD, Pica AM, Duran RG, et al.: Acupuncture reduces experimental renovascular hypertension through mechanisms involving nitric oxide synthases. *Microcirculation* 13: 577–585, 2006

Clinical Report 1 (Acupuncture)

*Two Cases of Low Back Pain in Pregnant Women Relieved
Using Low Acupuncture and Moxibustion Stimulation Dose
Evaluated with VAS and RDQ*

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[Introduction]

Katai et al. reported that they used in Japan needles with a diameter of 0.16 mm for the acupuncture and moxibustion treatment of low back pain during pregnancy, inserting and retaining those into reactive sites verified through palpation to a depth of about 5 mm, thereby achieving definite results¹⁾. On the other hand, multiple RCTs conducted abroad show a tendency that relevant evidence is about to be clarified²⁾. However, Lund et al. reported in 2006 that the comparison of the effects obtained in a deep needling group treated using the common deep insertion and a shallow needling group, where thin needles were inserted only superficially showed, that both treatment forms led to pain relief and no difference in the effectiveness could be found³⁾. After that no further reports examining the effectiveness of acupuncture and moxibustion treatment using a lighter than the usual stimulation are found.

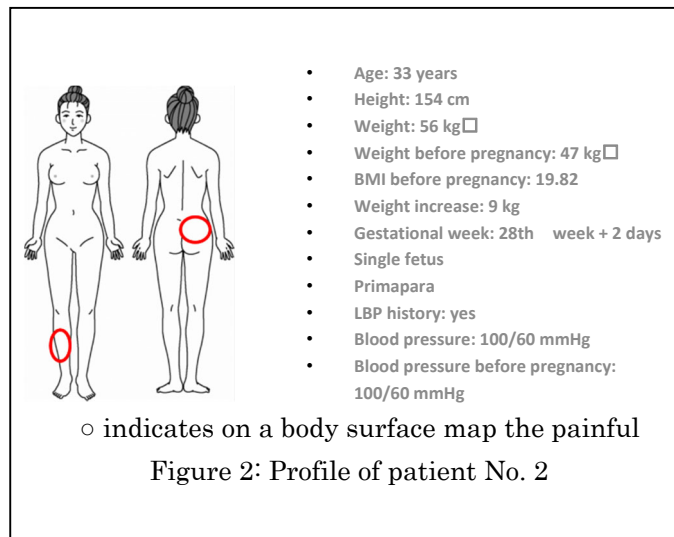
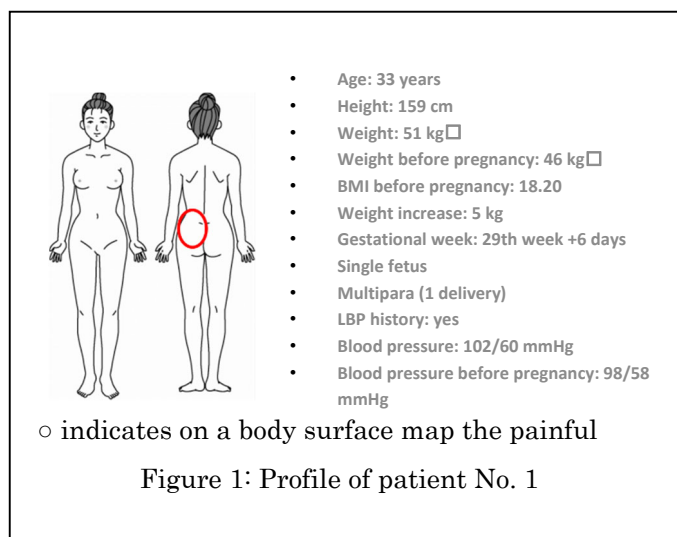
Accordingly, this study investigates the effects of acupuncture and moxibustion treatment for low back pain during pregnancy using only light stimulation.

[Cases]

In this study 2 pregnant women with the chief complaint of low back during the later half of their pregnancy visited an acupuncture and moxibustion clinic in a city on the outskirts of Tokyo with a population of 3.7 million.

Case No.1 was a multipara 29 weeks and 6 days pregnant with a single fetus, who complained of pain in the left buttock. Her age was 33 years, height 159 cm, weight 51 kg, weight before pregnancy 46 kg, BMI 18.2, weight increase was 5 kg and she had a history of low back pain (Figure 1).

Case No. 2 was a primapara 28 weeks and 2 days pregnant with a single fetus, who complained of pain in the right buttock and the development of pain on the outside of the right lower leg associated with a diffuse feeling of discomfort upon walking for about 10 minutes. Her age was 33 years, height 154 cm, weight 56 kg, weight before pregnancy 47 kg, BMI 19.82, weight increase was 9 kg and she had a history of low back pain (Figure 2).



[Methods]

In both cases the trunk ROM test and sacroiliac stress test were performed as physical examination. Since patient No. 2 complained in addition to the pain in the right buttock about right lower leg symptoms, additionally sensory and muscle tests and the sciatic nerve stretch test were performed, deep tendon and pathologic reflexes and Kemp's sign checked as well as arterial pulses palpated⁴⁻⁶⁾ (Table 1).

Table 1: Physical examination

First visit	Lordosis, kyphosis
Trunk range of motion	Anteflexion (finger-floor distance), retroflexion, lateral bending, rotation
Sacroiliac joint stress test	Gaenslen test, Patrick test Newton test (compression test, distraction test)
Sciatica	Straight leg raising test (SLR test)
Muscle testing	Quadriceps femoris, anterior tibialis, extensor hallucis longus, flexor hallucis longus muscles
Deep tendon reflexes	Achilles tendon reflex, patella tendon reflex
Pathologic reflexes	Babinski reflex
Intermittent claudication	Neuronal (Kemp sign) Vasal (artery palpation: dorsal artery of the foot, posterior tibial artery)
Palpation	Tenderness, percussion pain

For the acupuncture treatment 40 mm stainless steel needles with a diameter of 0.14 mm were used and either singularly inserted to a depth between 3 and 8 mm or else retained for about 10 minutes. For the moxibustion treatment moxa sticks were applied for 2 to 5 minutes to the extend, that patient experienced the heat as comfortable. Hot packs and far infrared irradiation were also applied as required (Table 2).

Table 2: Treatment

Acupuncture treatment
Used needles: length = 40 mm x diameter 0.14 mm
Stainless steel needles
Insertion depth: 3-8 mm
Insertion method: singular insertion, needle retaining (about 10 minutes)
Moxibustion treatment
Used moxa: stick moxa
Heat dose: so that the patient experiences it as comfortable
Stimulation duration: 2-5 minutes
Other: hot packs, far infrared irradiation

Under constant observation about 5 to 10 acupoints were selected from among Inkokku (KI10, Yingu), Chikuhin (KI9, Zhubin), Fukuryu (KI7, Fuliu), Taikei (KI3, Taixi), Suisen (KI5, Shuiquan), Yusen (KI1, Yongquan), Bokushin (BL61, Pushen), Taihaku (SP3, Taibai) and around the region of the chief complaint, or else into reactive spots marked by coolness, dampness, lack of power, muscle tension (Table 3).

Table 3: Used acupoints

Used acupoints
Inkokku (KI10, Yingu), Chikuhin (KI9, Zhubin), Fukuryu (KI7, Fuliu), Taikei (KI3, Taixi), Suisen (KI5, Shuiquan), Yusen (KI1, Yongquan), Bokushin (BL61, Pushen), Taihaku (SP3, Taibai), around the region of the chief complaint

Reactive spots marked by coolness, dampness, lack of power, muscle tension.

Selection of a total of 5-10 points.

For the evaluation we used a pain scale and a Visual Analogue Scale (below abbreviated VAS) as well as the lumbago specific QOL scale Roland-Morris Disability Questionnaire (below abbreviated RDQ). The VAS was implemented before each treatment and the RDQ during the first visit and 5 weeks later before treatment (Table 4).

Table 4: Evaluation method and measurements

Evaluation method
Pain scale: Visual analogue scale (VAS) 100 mm
Lumbago specific QOL scale: Roland-Morris Disability Questionnaire (RDQ)
Measurement
VAS: before each treatment
RDQ: during first consultation and 5 weeks later before treatment

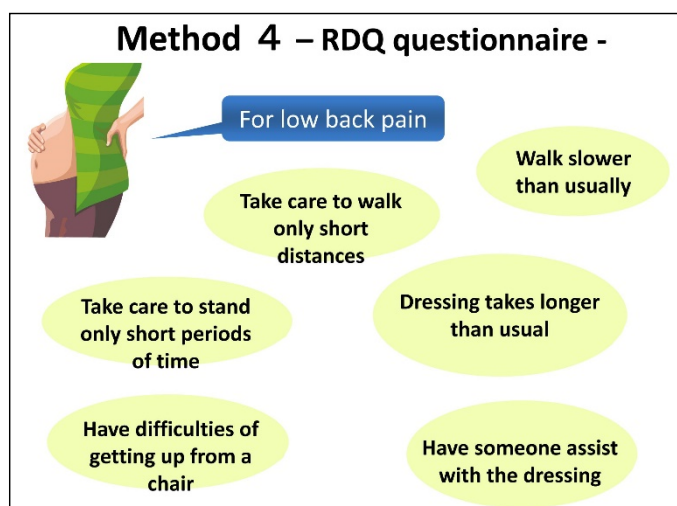


Figure 3: Main RDQ items

The VAS was recorded as a 100-mm long line on the questionnaire marked "no pain" on one end and "maximal pain" at the other end. The patients themselves marked the degree of pain on this line and this position was then measured from 0 mm, using the obtained numerical value as pain evaluation⁸⁾.

The RDQ is an evaluation method using a questionnaire inquiring after the presence of low back pain induced disability through 24 questions pertaining to daily life activities like "stand", "walk", "dress" etc., which the patients answer directly with either yes or no. It is used widely worldwide and expected to be employed for studies of therapies and low back pain related factors⁹⁾ (Figure 3). For an evaluation using the RDQ a score between 0 and 24 points is obtained and increasingly higher scores indicate a more severe impairment of daily life and low back pain induced reduction in QOL (Table 5).

[Results]

Multiple sacroiliac joint stress tests showed in patient No. 1 positive results and in the region of the chief complaint tenderness was also found. In patient No. 2 the lordosis of the spine was mildly pronounced and anteflexion slightly restricted. Although the straight leg raising test was both on the left and right negative, elevation on the right side to close to 70° elicited pain on the posterior side of the thigh. On the right side lateral to the interspinous spaces L3 to L5 and on the right buttock tenderness was found. However, the border of the region of slightly decreased sensation was indistinct and no anomalies were found for muscle strength, deep tendon reflexes, pathologic reflexes and similar neurologic tests. Moreover, arterial pulses could be palpated (Table 6).

Table 5: All 24 RDQ items and evaluation

1	Spend most of the time at home because of low back pain	13	It hurts almost always
2	Frequently changes body position to alleviate the low back pain	14	Turning over in bed is difficult because of the low back pain
3	Walk slower than usually because of low back pain	15	Has little appetite because of the low back pain
4	The usual house chores cannot be done at all because of low back pain	16	Have difficulties wearing socks or stockings because of the low back pain
5	Uses handrails to climb stairs because of low back pain	17	Take care to walk only short distances because of the low back pain
6	Spend more time resting by laying down because of the low back pain	18	Does not sleep well because of the low back pain (Please select "Yes" under "Use sleeping pills because of the pain")
7	Cannot get up from an armchair (a chair supporting the body for comfortable sitting, sit deeply back in a chair) without holding on to something because of the low back pain	19	Ask someone for help with the dressing because of the low back pain
8	Sometimes ask people for help because of the low back pain	20	Spend most of the day sitting because of the low back pain
9	Dressing takes longer than usual because of the low back pain	21	Take care not to exert oneself when doing the household chores because of the low back pain
10	Take care to stand only for short periods of time because of the low back pain	22	Get more easily irritated or angry at others because of the low back pain
11	Take care not bend from the waist or kneel because of the low back pain		Climb stairs slower than usual because of the low back pain
12	Have difficulties of getting up from a chair because of the low back pain	24	Spend most of the time in bed (futon) because of the low back pain

Evaluation method: Assigning scores between 0 and 24 points. The higher the score the higher is the degree of daily life impairment, indicating a decrease in QOL because of the low back pain.

Table 6: Results of the physical examination

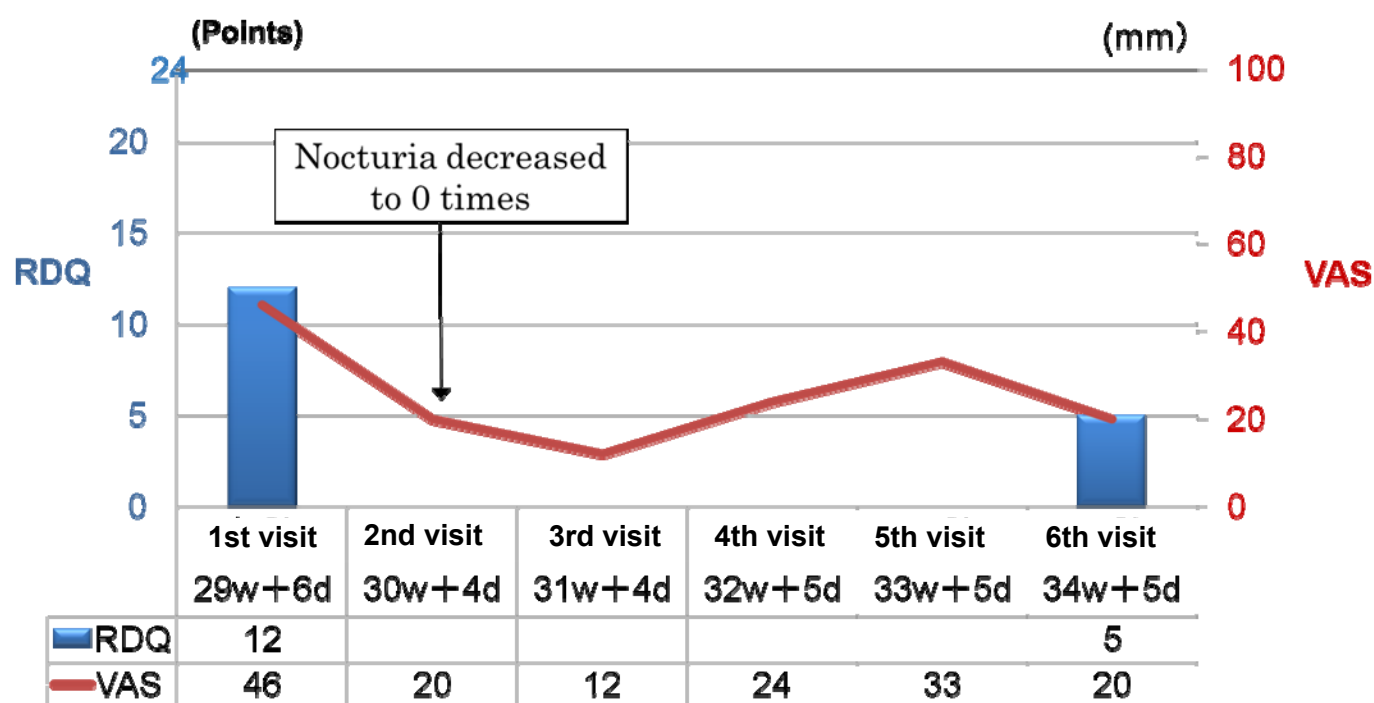
	Case No. 1	Case No. 2
Lordosis	n.p.	mildly pronounced
Trunk ROM anteflexion (finger-floor distance)	n.p.	n.p. (30 cm)
Gaenslen test	both left and right (−)	both left and right (−)
Newton test (compression test)	left (+) right (−)	both left and right (−)
Newton test (distraction test)	both left and right (−)	(−)
Patrick test	both left and right on the left (+)	both left and right (−)
Straight leg raising test (SLR test)		(−) at 70° pain is triggered on the posterior side of the thigh
Tenderness, percussion pain	Tenderness around the left sacroiliac joint	Tenderness to the right of the spaces between the spinous processes of L3~L5 and on the right buttock

1) Case No. 1 (Graph 1)

Gestational weeks are plotted on the abscissa of the graph, while the ordinate shows on the left side the RDQ score and on the right side the VAS value. In patient No. 1 the RDQ score decreased from 12 to 5 points and the VAS of 46 mm also gradually decreased to reach 5 weeks later 20 mm.

Also, the nocturia of once per night reported during the first visit had decreased by the second visit to 0 times. During the daytime the urinary output per micturition increased, the drooping abdomen became firm, appetite improved, fatigue decreased and the complaints improved.

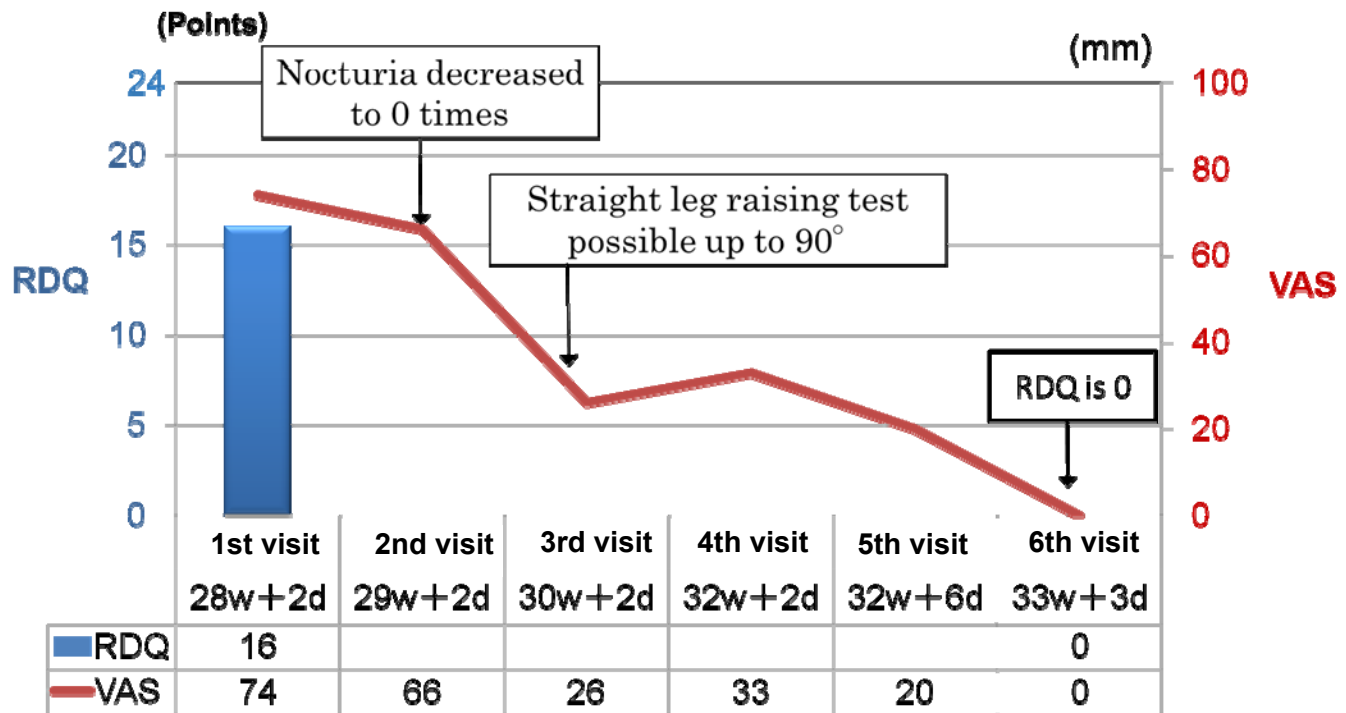
Graph 1: Course of patient No. 1



During the first visit the patient complained of a nocturia of once per night, but by the second visit this had decreased to 0 times. During the daytime the urinary output per micturition increased, the drooping abdomen became firm, appetite improved, fatigue decreased and the complaints improved.

2) Case No. 2 (Graph 2)

In patient No. 2 the RDQ score of 16 points obtained during the first visit decreased 5 weeks later, at a gestational age of 33 weeks + 3 days, to 0 points and the VAS of 74 mm gradually decreased to 0 mm. The straight leg raising test that induced pain during the first visit upon elevation to 70° on the posterior side of the thigh, but after the third visit this maneuver elicited pain any longer even at an angle of more than 90°.



The nocturia has decreased from 1 to 0 times, so that the patient could sleep well. The sensation of cold of the abdomen and feet had been replaced by warmth etc. and otherwise similar improvements of complaints like in patient No. 1 were observed.

Graph 2: Course of patient No. 2

Further, the nocturia of once per night reported during the first visit decreased to 0 and the patient could sleep well. The sensation of cold of the abdomen and feet had been replaced by warmth etc. and otherwise similar improvements of complaints like in patient No. 1 were observed.

[Discussion]

1) Clinical picture of low back pain during pregnancy

A Japanese study showed a prevalence of 50-70% for low back pain during pregnancy. The pain occurs first either during early gestation or the second trimester and reportedly tends to get worse during the course of the pregnancy. Most cases are comparatively mild, but severe cases of low back pain restricting activities daily living and significantly decreasing the QOL are also observed¹⁰⁻¹⁴.

2) Pathology

Low back pain during pregnancy may conceivably be caused by (1) increased burden on the lumbodorsal muscles due to the increase in body weight, influence on posture because the enlarging uterus shifts the center of gravity forward (postural), (2) loosening of pelvic ligaments around the sacroiliac joint or the pubic symphysis through the action of sex steroid hormones or relaxin may increase their mobility of these joints, resulting in an instability of the pelvic ring (pelvic ring instability), (3) pregnancy induced increase in body weight and changes in posture may place severe stress on latent intervertebral disc degeneration and thus can cause a lumbar intervertebral disc to prolapse (lumbar intervertebral disk herniation) (Table 7). As opposed to the non-pregnant state there are limits to x-ray, CT or MRI imaging or physical examinations that can be performed during pregnancy, so that the differential diagnosis is made

relying on anamnesis and a minimum of physical examination¹⁵⁾.

Surmising the pathology from the anamnesis and physical examination the condition in patient No. 1 was considered to be due to pelvic ring instability and that in patient No. 2 a postural lumbago. However, low back pain treatment in recent years has shown, that not only biological factors, but also social and psychological factors may be involved¹⁶⁾. Before the background of physiological changes caused by the pregnancy many factors are considered to contribute to low back pain during pregnancy, but the details of the condition are not yet clear (Figure 4).

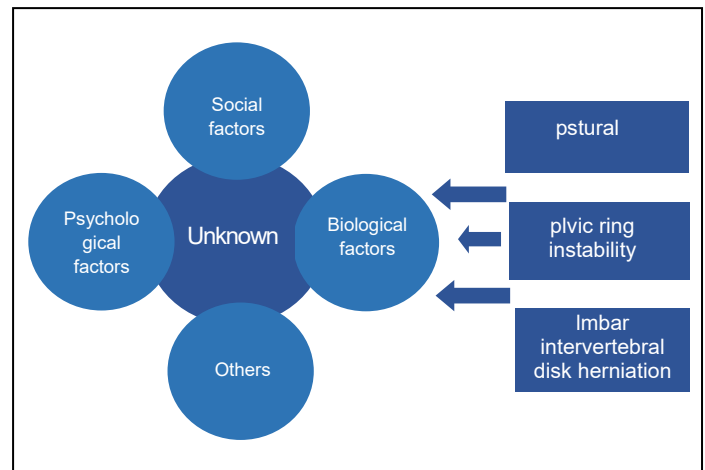


Figure 4: Factors for low back pain during pregnancy

Table 7: Biological factors for low back pain during pregnancy

Postural lumbago	Increased burden on the lumbodorsal muscles due to an increase in body weight. Then enlarging uterus shifts the center of gravity forwards and thus influences posture.
Pelvic ring instability	The action of sex steroid hormones or relaxin loosen pelvic ligaments of the sacroiliac joint and pubic symphysis, thereby increasing their mobility, resulting in pelvic ring instability.
Lumbar intervertebral disk herniation	The pregnancy induced increase in body weight and changes in posture may place severe stress on latent intervertebral disc degeneration and thus can cause a lumbar intervertebral disc to prolapse.

3) Acupuncture treatment

The acupuncture treatment for low back pain conceivably uses local treatment of the affected region, or else distant treatment sites exploiting channel sinews or channels. Lund compared the use of needles with a diameter of 0.3 mm to needle 3-4 points (on both sides) on the bladder channel with a stimulation dose strong enough to obtain the needling sensation for his treatment of a deep needling group and needles with a diameter of 0.2 mm inserted only superficially into the same sites to be retained there for the shallow needling group and found, that pain was alleviated in both groups and reported he did not find any differences in the effects³⁾. (Table 8)

Table 8: Comparison of the treatment by Lund et al. and Katai et al.

Author Publication year	Treatment site	Number of treated acupoints	Therapeutic tools	Stimulation method	
Lund et al. 2006	Lumbosacral region abdomen legs arms	10-14 (calculated)	Deep needling group	Diameter 0.3mm	Insertion into the muscles, twirling, needling sensation
Shallow needling group	Diameter 0.2mm	Insertion through the skin perpendicular needling			
Shuichi Katai et al. 2003	Legs (lumbosacral region)			Diameter 0.16mm	Retaining the needles at a depth of about 5mm, until the needle tip is brought in contact with the reaction

*diameter 0.3 mm (No.8 needle), 0.2mm (No.3), 0.16mm (No.1 needle)

Both examined patients had apart from the chief complaint many indefinite complaints like abdominal distention, shoulder stiffness, chilling, leg cramps, nocturia, fatigue etc. Thus, regarding the acupuncture treatment we palpated with reference to the report by Katai et al. relevant channel sinews and channels and selected mainly reactive spots along those, using thin needles for singular insertion to a depth of about 3-8 mm or else needle retaining. For the moxibustion treatment we used stick moxa, applying it to the region of the chief complaint and the reactive spots on the legs confirmed through palpation, adjusting the amount of heat so that the patient experienced it as comfortable.

Watanabe et al. reported that their investigation of general patients with low back pain showed for lumbago patients consulting medical facilities a RDQ score of 7.4¹⁷⁾. Comparing the score for the intensity of pain due to pelvic pain and the impairment of activity of daily life in the 28th and 36th gestational week Ando et al. reported, that in spite of instructions pertaining to posture during daily life, exercise for the expectant mothers and instructions in the proper use of pelvic belts the pain intensity did not vary and there was a high degree of impairment of activity of daily life¹⁸⁾.

The RDQ scores of the investigated patients during their first visit were 12 and 16 points respectively, each of which being higher than the mentioned 7.4 points, so that the QOL of these patients had been decreased by the low back pain.

The physical examinations performed in this study on patient No. 1 suggested pelvic pain and from the start of the acupuncture and moxibustion treatment in the 29th gestational week pain and impairment of activity of daily life gradually began to decrease, so that 5 weeks later the RDQ score had dropped to 5

points. Conversely, in patient No. 2 the nature of the pelvic pain dealt with by Ando et al. differed, but here too the RDQ score had decreased after 5 weeks to 0 points and improvements in the QOL were observed.

Thus the use of thin needles formerly often treated as placebo or sham acupuncture, provides a comfortable acupuncture treatment. If used elsewhere than locally, it offers a little invasive treatment and allowed to obtain patient satisfying therapeutic effects.

In recent years clinical and physiological studies pertaining to the use of press needles tend to clearly show that minimal stimulation elicits physiological activation¹⁹⁻²⁰⁾. For further developments of acupuncture and moxibustion medicine in the future investigation of the effects of low-invasive stimulation are considered to be required and further research in this field anticipated.

Likely many factors contribute to the development of low back pain during pregnancy, clinical symptoms are very diverse and there are patients in whom sufficient effects cannot be achieved. In conjunction with an elucidation of the pathology of low back pain during pregnancy the mechanisms of acupuncture and moxibustion are also expected to be clarified in the future.

The evidence for acupuncture and moxibustion using weak stimulation methods must be substantiated in the future through RCTs etc.

[Conclusion]

The results of this study examining two patients suggested, that acupuncture and moxibustion using low stimulation doses allows to alleviate the degree of low back pain during pregnancy and possibly improve the QOL.

[References]

- 1) huichi Katai, Takeshi Matsumoto, Isao Nakamura et al.: Local and distant treatment; effects of needling the arms and legs for low back pain during pregnancy and traumatic cervical syndrome as examples of locomotor diseases; Journal of the Japan Society of Acupuncture and Moxibustion, Vol. 3, No. 1, pp 21-27, February 2003
- 2) Eropean guidelines for the diagnosis and treatment of pelvic girdle pain Eur Spine J (2008) 17: 794–819
- 3) Lund I et al.: Decrease of pregnant women's pelvic pain after acupuncture; a randomized controlled single-blind study. Acta Obstet Gynecol Scand. 2006; 85(1); 12-9
- 4) Yoshiaki Tazaki, M.D. Yoshio Saito, M.D.: Physical Examination of the Nervous System 16th Edition, 2008, NANZANDO COMPANY, LIMITED Tokyo
- 5) Stanley Hoppenfeld, M.D.: PHYSICAL EXAMINATION OF THE SPINE AND EXTREMITIES 1985, Translation supervisor: Motoo Nozaki; translated by: Takeshi Shudo, Kenji Kariyama, Sumie Tsuneishi; Ishiyaku Publication Inc., Tokyo
- 6) Joshua Cleland: Orthopaedic Clinical Examination: An Evidence-Based Approach for Physical Therapists 2007, Translation supervised by Takeshi Yanagisawa, Kiyokazu Akasaka, Elsevier Japan Company, Japan
- 7) Shuichi Katai: Introduction of Japanese Acupuncture Considering the Therapist's Hand, The Journal of Kampo, Acupuncture and Integrative Medicine (KAIM) Volume 2, Number 2, 29-30, Summer 2007
- 8) Toshikatsu Yokota: Pain Mechanisms for Clinicians, 1990 Nankodo, Tokyo
- 9) Roland-Morris Disability Questionnaire (RDQ); Japanese Manual — Lumbago Specific QOL Score; author and editor Shunichi Fukuhara; Iryo Bunka Sha, Tokyo, March 2004
- 10) Harumi Shinkoda, Kunshige Hamasaki, Kouichi Shinkoda: Low back pain during pregnancy; Journal of the Japan Society of Maternal Health, Vol. 31, No. 1, 77-82, 1990
- 11) Yoshiyuki Tashiro, Junichi Kunogi, Mitsuo Hasue, Yuichiro Shinko, Hiroshi Kamata, Yoshimitsu Hoshikawa: Low back pain in pregnancy, J. Lumbar Spine Disord., 2(1): 22-26, 1996
- 12) Midori Murai, Yuriko Kasumi, Hajime Ito: Fact-finding survey of low back pain in pregnant and puerperal women, Ibaraki Prefectural University of Health Sciences Bulletin, Vol. 10: 47-53, 2005
- 13) Masako Momoi: A Descriptive Study of the Daily Living Activities of Pregnant Women Experiencing Low Back Pain, St. Luke's College of Nursing Bulletin No. 25, pp 1-8, March 1999
- 14) Haruko Shinkawa, Mieko Shimada, Mako Hayase, Tsubura Inui: HAYASE, Tsubura INUI: A survey of the variety, incidence rate, and frequency of minor Symptoms currently experienced by expectant mothers, J. Jpn. Acad. Midwif., Vol.23, No.1, 48-58, 2009
- 15) Mitsuhiro Sugimoto: Low back pain; Obstetrics and Gynecology, Vol. 70, No. 11; Obstetric and Gynecologic Treatment; Sign-based Diagnosis and Treatment in Obstetrics; Second and third trimester of pregnancy; 1656-1660, 2003
- 16) Shinichi Kikuchi: Environmental changes related to low back pain treatment; Low Back Pain, Igaku Shoin, Tokyo, pp 6-15, 2003
- 17) Kazuyuki Watanabe, Shinichi Kikuchi, Koji Otani et al.: Epidemiologic study of musculoskeletal disorders: The Minami-Aizu study (part 5), The differences between low back pain patients with treatment and non-treatment evaluated by Roland-Morris Disability Questionnaire (RDQ); Clinical orthopedic surgery 44(10), 1017-1022, October 2009

- 18) Hukiko Ando, Kazutomo Ohashi: CLINICAL TRIAL TO IMPROVE DAILY ACTIVITY OF PREGNANT WOMAN WITH PELVIC PAIN BY PELVIC BELT, Journal of the Osaka University, Division of Nursing Sciences Vol.15, No.1 (2009)
- 19) Yasuhisa Kaneko, Eiji Furuya, Ayumi Sakamoto: The Effect of Press Tack Needle Treatment on Muscle Soreness after Triathlon Race–Placebo-controlled Study, Journal of The Japan Society of Acupuncture and Moxibustion; Vol. 56, No. 2, pp 158-165 (2006)
- 20) Kenji Kawakita, Adrian White: Physiologic basis of sham acupuncture effects during clinical acupuncture tests, evidence based acupuncture and moxibustion medicine of low back pain, The Japan Society of Acupuncture and Moxibustion Edition; June 10, 2010, Ishiyaku Publication Inc., Tokyo, pp 99-104

Clinical Report 2 (Kampo Medicine)

Headache 2

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< Tension headache; spleen and stomach deficiency cold, deficiency of heart and spleen >

Case (4): age 49, female, visited our clinic in February XY.

Chief complaint: headache, anxiety, discomfort in the gastric region, arthralgia of multiple joints

Present illness:

At the age of 27, triggered by a pregnancy, the patient started to suffer from frequent headaches. She is regularly using commercial analgesics, but since half a year ago their effects were declining. The headaches were a sort of pinching pain from the back of the head down the back of the neck and at the same time associated with ocular pain, repeating cycles of alleviation and aggravation almost daily. The anxiety influenced the gastric discomfort, so that she could eat, but felt nauseated on an empty stomach and therefore constantly ate little portions. She had no sense of satiety. Another doctor diagnosed reflux esophagitis and prescribed a protective agent for the gastric mucosa, but its effect was obscure. Moreover, about 1 year earlier the patient had been diagnosed with chronic rheumatoid arthritis and is currently under treatment. Three months ago development of frozen shoulder. Three years ago she worried about family matters and this problem now got worse about half a year ago, so that *saikokaryukotsuboreito* was recommended in a pharmacy, which she is currently using.

Findings upon first visit:

The facial complexion was yellowish-white and the patient had a leptosomatic habit, she was occupied by worries about her symptoms and described the circumstances of their development with dissatisfaction. She repeatedly asked: "What should

I do?" This gave the impression that she had started to panic because of what was going on with her both mentally and physically. There was a mild degree of chilliness of both hands and feet, recently her visual acuity deteriorated and she had nocturnal urination and dryness of the mouth during the night. One bowel movement every three days. No feeling of exhaustion. The pulse was thin and slippery, the tongue had a thick white fur and she had a bitter taste in the mouth. The abdomen showed chilliness and increased resistance of the epigastric region and a mild degree of fullness, tenderness or discomfort of the hypochondrium, softness of the lower abdomen, tenderness of both inguinal regions, marked palpitation above the umbilicus were observed.

Pattern: deficiency of both heart and spleen, deficiency cold (stagnation of liver qi)

Prescription: *kamikihito*, *keishininjinto*

Course: The patient expressed strong anxiety regarding discontinuation of the *saikokaryukotsuboreito* she was using so far, so that the prescription was first changed to *keishikaryukotsuboreito*, taking her feelings into account. This helped to overcome her anxiety and settle down, but still left the symptoms incompletely controlled, with no changes in the incidence of headaches and gastric discomfort. After persuading the patient to use a prescription with added *keishininjinto* the incidence of the headaches decreased to once per week. Later, using *kamikihito* as the main formula and reducing the dose of *keishikaryukotsuboreito* to 1/3 both headaches and gastric discomfort improved and after three weeks were almost completely alleviated. The arthralgia and anxiety also improved and the patient now presents with a calm expression.

< Tension headache; liver qi stagnation, transverse invasion of the stomach >

Case (5): age 41, female, employee

Chief complaint: headache, gastrointestinal weakness

Present illness:

From the time she became employed the patient

repeatedly experienced stomach disorders, belching, abdominal distention, a bitter taste in the mouth and reduced appetite, occasionally gastric pain. After examination she was diagnosed with neurotic gastritis and was prescribed western medicine, but later visited our clinic, because the symptoms did not improve. The headaches developed at the same time and were characterized by a slowly progressive and continuous dull pain.

Findings upon first visit:

Intermediate build, the skin appeared slightly yellowish brown and there was some edema. She had difficulties waking up in the morning and felt exhausted and headheavy from morning; usually did not have any appetite in the morning. Although she had one bowel movement a day, there was always a sense of incomplete evacuation. The menstruation was regular, but prior to the onset of the menstruation the headaches grew worse. She complained about shoulder stiffness. The pulse was thin and wiry, the tongue was faintly dark red and had a thick white fur and teeth marks, the abdomen showed a marked degree of fullness, tenderness or discomfort of the hypochondrium.

Pattern: liver qi stagnation, transverse invasion of the stomach

Prescription: *saikekeishito*

Course:

After about 2 months of treatment, the ease with which she could wake up in the morning improved and both the sense of exhaustion and headheaviness decreased. Her stomach felt comfortable too, but she was easily susceptible to stress at work. Improvement of the shoulder stiffness. Since after about one year of treatment almost all symptoms had healed, the dose was tapered, but since complete interruption of the treatment resulted in a deterioration of her physical condition, she currently continues on a low dose schedule.

< Migraine; tension headache; blood stasis >

Case (6): age 24 years, female, employee

Chief complaint: headache

Anamnesis: At the age of 21 onset of a collagen disease, that was treated over a period of one year with steroids and the therapy then terminated.

Present illness:

Onset of repeatedly occurring headaches after the patient started to work in an office at the age of 23. Her work requires that she uses a computer. The headaches were characterized by throbbing, pulsating pain (1) in the occipital region and (2) the temporal regions and occasionally she also felt like she had been hit or (3) a pain as if a heavy stone were placed in the center of her head. The incidence fluctuated but was higher on hot days with fair weather so that summers were difficult for her. A neurosurgeon diagnosed migraine and tension headache. The use of acetaminophen during periods of pain became increasingly frequent. Currently, she uses analgesics on average 5 times per week.

Findings upon first visit:

Obese physique, muscular, face was flushed red, there was acne on the mandible, she disliked heat and there was no sense of coldness. She had a good appetite, but since about one and a half years ago she experienced almost daily heartburn and gastric discomfort. She had a dry mouth and preferred cool drinking water. There was a tendency toward easy development of edema of the face and extremities. She had difficulties falling asleep and experienced night sweats all over her body. She had 1 to 2 bowel movements per day (in the morning). Her eyes tended to tire easily and she was also easily irritated. Her menstrual cycle ranged between 30 to 35 days, lasted for 3 days, she had little menstrual flow and the menstrual blood was dark red. Delayed menstruation. The pulse was slippery and wiry, the tongue pale and the sublingual veins thin, there was distention of the lower abdomen and tenderness on the right side next to the naval.

Pattern: exterior-interior evil repletion

Prescription: *bofutsushosan*

Course:

Two weeks later she experienced comfortable bowel movements and lost about 1 kg in body weight. Both frequency and intensity of the headaches decreased. Pulse was wiry and thin, tongue slightly red. Six weeks later improvement of the sense of body heat. Headaches and dizziness occurring during the forenoon sometimes were alleviated when she had diarrhea. There was a strong sense of fullness, tenderness or discomfort of the hypochondrium, the entire lower abdomen was tender and even stroking it hurt. Drugs for expelling blood stasis and rectifying qi were considered necessary and thus a modified formula of *tsudosan* used. Ten weeks later the usage of analgesics had decreased to 1-2 times per week and without her really realizing since when, she noticed that the gastric symptoms did not longer bother her. She continues to take the formula.

< Migraine / tension headache; blood stasis >

Case (7): age 62 years, female, housewife

Chief complaint: headache, dyshidrosis, constipation

Present illness:

Since 10 years, following her climacteric age, the patient experienced hot flashes and abnormal sweating, constipation and was prescribed at another clinic *unseiin + tokakujokito* and similar formulas, which improved these symptoms. Recently, the same symptoms recurred and the patient visited our clinic, also because of the headaches she had since her youth.

The headaches started at the age of 20, her eyesight deteriorated and she experienced throbbing pain 2-3 times a month. On these occasions she used commercial analgesics and rested for 2-3 days, but sometimes these symptoms were also accompanied by nausea and vomiting. Also, from her climacteric age onward she experienced in the morning upon getting up a sense of headheaviness and felt as if she wore a hat. Formerly, she reported that the use of *kamishoyosan* reduced the frequency of analgesic use. She also had been constipated since her teens and could not have bowel movements without the

use of cathartics. She used a cathartic from a Kampo pharmacy (content unknown) and had one bowel movement every 3 to 5 days. There was also cervical spondylosis (C7).

Findings upon first visit:

Fair-skinned large-built person, obese, light brown complexion of the face with many freckles. In her daily life she is working industriously. She has a big appetite, gets up twice for nocturnal urination, dreams a lot, is under stress relating to family matters, her legs are prone to easy development of edema, her face flushes and she sweats abnormally on her head and back, dislikes summers, does not complain of chilliness. The pulse was deep and wiry, the tongue deep red with a white fur and teeth marks, engorged sublingual veins, the abdomen showed a mild degree of fullness, tenderness or discomfort of the hypochondrium and there was a marked degree of tenderness on both sides of the naval.

Pattern: blood stasis, qi stagnation

Prescription: *tsudosan*

Course:

The administration of *tsudosan* led to a quick alleviation of the headache and 2 months later the use of analgesics had decreased to half its former frequency. The frequency of the use of commercially available cathartic did not change, but upon combination with *daibotanpito* she experienced from the following month onwards comfortable bowel movements and in association with this the use of analgesics decreased to the range between one and two tenths. Since the alleviation of the symptoms was also associated with improvements in the blood stasis findings of the tongue and abdomen, she continued to take this formula and gradually improved. She stabilized mentally too.

Clinical Report 3 (Kampo Medicine)

A Case in which Saireito was Effective for Irritable Bowel Syndrome

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< Summary >

[Background]

Daily clinical experience regularly shows that irritable bowel syndrome is one of the diseases for which Kampo medicine is effective. Various prescriptions are used, but there are few reports on the use of *saireito*, so that I would like to introduce this one here.

[Case and course]

Forty-six-year old female. She complained of stress induced abdominal pain and diarrhea since she was a teenager. Being very busy at work aggravates the symptoms. The results of detailed examinations in medical facilities visited in the past led to the diagnosis of irritable bowel syndrome. She had been treated over a period of about 5 years in another clinic, but visited our department because lack of improvement of the symptoms. I administered *kamishoyosan*, but switched to *saireito* because the symptoms did not improve and thereby achieved some relief.

[Discussion]

Generally, *saireito* is often used for acute diarrhea or diarrhea caused by inflammatory diseases, but depending on the pathology and considering other simultaneously used medications, it is also considered to be effective for irritable bowel syndrome.

< Text body >

[Background]

Kampo medicines have also in clinical studies been shown to be effective for irritable bowel syndrome¹⁾ and this is one of the conditions, for which their effectiveness can be experienced in daily clinical practice. Frequently the correlation to the liver and spleen as well as the stomach has been discussed. The flow of spleen and stomach qi is controlled by the liver, but if liver qi flow stagnates, the flow of spleen and

stomach qi is obstructed, resulting in constipation, or else the stagnant liver qi excessively flows into spleen and stomach, causing diarrhea. When mainly the spleen is causing problems, a diarrhea type condition develops, while with problems caused mainly by the stomach, nausea and vomiting develops. Also, qi stagnation often causes the abdominal pain. Before a background of liver qi flow anomalies, the influence of stress and emotions, or a deficiency of liver blood and yin can impede a smooth movement of the liver qi. Again, if the liver problems are not particularly marked, the presence of spleen and stomach problems could appear as a relative uprising of liver qi. 2) In these conditions marked by liver qi stagnation and liver blood deficiency and associated with diarrhea *kamishoyosan* is used, while *daisaikotokyodaio* is used for constipation. If this occurs due to asthenia of spleen and stomach, formulas like *keishikashakuyakuto* are often used. *Saireito* is a combination of *shosaikoto* + *goreisan* and frequently used for acute diarrhea or inflammatory diarrheal diseases, while it is not very often given for irritable bowel syndrome. Here I report a case where *saireito* proved to be effective for the treatment of irritable bowel syndrome.

[Case] 46-year old female

[Chief complaint] chronic diarrhea, abdominal pain

[Anamnesis] migraine

[Present illness]

The patient developed diarrhea every time she was tense since she was a teenager. Being very busy at work aggravates the symptoms. She may have 6-10 bowel movements per day of which the first two are soft stools, while the remaining movements are watery diarrhea. After passing diarrheal stools the abdominal pain tends to decrease, but endurance leads to severe abdominal pain. There is a mild degree of nausea. Based on the results of detailed examinations an irritable bowel syndrome was diagnosed and the patient was treated by a local physician, but later visited our clinic, because the symptoms did not improve.

[Current condition]

Height: 155 cm; weight: 45 kg; talkative, has appetite, is easily irritated, has a dry mouth and while complains of chilly hands and feet, her face easily flushes.

Pulse diagnosis: bilateral wiry and slippery

Tongue diagnosis: thin white coat, tip was slightly red

Abdominal diagnosis: right-sided fullness in the chest and hypochondrium, epigastric stuffiness

[Course]

Initially I administered *kamishoyosan*. However, after 4 weeks of administration I still could not observe any changes in the symptoms. The patient suffered from violent diarrhea and I thought it would be difficult to achieve improvement of fluid absorption from the small intestines mediated by spleen function with *Atractylodis Lancea Rhizome* and *Paria* of *kamishoyosan* alone. Therefore I switched to *goreisan* for its powerful strengthening of fluid absorption combined with the improvement of liver qi flow provided by *shosaikoto*. After 4 weeks of administration the frequency of soft stools had decreased to 3 times per day. Yet, after 8 weeks of treatment the frequency of watery stools increased again to 4 times per day, so that I added *tokishakuyakusan*. Following the start of the combination treatment the frequency of soft stools stabilized at 3 times per day.

[Discussion]

The patient presented with stress-induced watery diarrhea I considered to be an indication for *kamishoyosan*, which was, however, ineffective. *Kamishoyosan* (*Bupleuri* Radix 3, *Paeoniae* Radix 3, *Angelicae* Radix 3, *Atractylodis Lanceae* Rhizome 3, *Poria* 3, *Gardeniae* Fructus 2, *Moutan* Cortex 2, *Menthae* Herba 1, *Zingiberis* Rhizoma 1, *Glycyrrhizae* Radix 1) is composed of the liver qi flow improving *Bupleuri* Radix, *Menthae* Herba, liver fire eliminating *Gardeniae* Fructus, *Moutan* Cortex / *Bupleuri* Radix / *Menthae* Herba, liver blood supplementing Japanese angelica root, *Paeoniae* Radix, spleen metabolism activating *Atractylodis*

Lancea Rhizome / *Poria* and spleen function improving *Zingiberis* Rhizoma and *Glycyrrhizae* Radix. This shows that the components of this formula improve the liver qi stagnation and then consequently affect the spleen. On the other hand, the combination of *shosaikoto* and *goreisan* forms the framework of *saireito* (*Bupleuri* Radix 7, *Alismatis* Rhizome 5, *Pinelliae* Tuber 5, *Scutellariae* Radix 3, *Atractylodis Lanceae* Rhizome 3, *Poliporus* 3, *Poria* 3, Ginseng 3, *Zizyphi* fructus 3, *Cinnamomi* Cortex 2, *Glycyrrhizae* Radix 2, *Zingiberis* Rhizoma 1) in which the amount of *Bupleuri* radix is increased to improve the flow of liver qi and contains the powerful liver heat dissipating *Scutellaria* Radix, *Bupleuri* Radix, the fluid metabolism of the spleen increasing *Atractylodis Lanceae* Rhizome, *Poria*, Chuling, *Alismatis* Rhizome, *Pinelliae* Tuber, spleen function improving ginseng, *Zizyphi* Fructus, ginger and *Glycyrrhizae* Radix. Compared to *kamishoyosan* it is more powerful in improving liver qi stagnation and dissipating heat and activates the fluid metabolism of the spleen. That is why I thought this formula is more effective for treating stress-induced liver qi stagnation, consequently leading to diarrhea than *kamishoyosan*. However, since *saireito* does not contain any liver blood tonifying drugs, the liver qi stagnation developing before a background of liver blood deficiency could not be improved and therefore possibly led to the recurrence of the symptoms. The addition of liver blood supplementing and spleen fluid metabolism activating *tokishakuyakusan* is considered to have led to an effective treatment.

- 1) Alan Bensoussan etc. Treatment of Irritable Bowel Syndrome With Chinese Herbal Medicine A Randomized Controlled Trial JAMA. 1998; 280:1585-158
- 2) Hiromichi Yasui: Kampo Medicine for Medical Students [Basics], Oriental Medical Publishing Chiba 2008

Front Line of Kampo Pharmacology

Review of Research Presentations on Kampo Medicines 4

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This series will introduce the recent research and studies relating to Kampo medicines presented at academic conferences. This installment of the series provides the presentations planned to be made at The 131st Annual Meeting of Pharmaceutical Society of Japan in Shizuoka scheduled on March 28-31, 2011. Because of the Great East Japan Earthquake, the conference was cancelled. However, the contents of the abstracts planned for the March 28 presentation are regarded as having been published.

Research of quality evaluation of crude drugs and their discrimination

Yamauchi, et al. of Doshisha Women's College of Liberal Arts reported that an HPLC-UV method with the pre-treatment using a polyvinylpyrrolidone column is effective for analyzing arecoline contained in Aracea Seed.

Wakana, et al. of National Institute of Health Sciences reported that they have evaluated the quality of *Paeoniae Radix* by ¹H-NMR-based metabolom analysis and discriminated individual cultivars although production sites could not be differentiated.

Doi, et al. of Kanazawa University have evaluated the usefulness of a colorimeter for the quality evaluation of Ginger and Processed Ginger and clarified that the device can determine the intensity of heating although it cannot differentiate steamed ginger rhizomes.

Cultivation research of crude drug materials

Kojoma, et al. of Health Sciences University of

Hokkaido reported that they have investigated the content amount of liquiritin as a measure for growing the high quality **phyletic line of *Glycyrrhiza uralensis*** that is the plant material of Licorice and found large variations in content volume, which, they explained, positively correlate with the content volume of glucyrrhithic acid used as an indicator ingredient by Japanese Pharmacopoeia.

Development of crude drug products

Sakai, et al. of Hokkaido College of Pharmacy have developed a w/o cream containing *Cnidii Monnieri* Fructus and *Kochia Fructus*, reporting that it is sufficiently marketable as a commodity in view of stability, impression from use, and moisturizing effect.

Basic pharmacological study on crude drugs and Kampo formulas

Ohta, et al. of Toho University reported that they have investigated the in vitro action of aldose reductase inhibition of varieties of Kampo extract and found that *sokeikakketsuto* (Channels-Dredging and Blood-Activating Decoction) gives the strongest inhibition.

Yamabe, et al. of University of Toyama reported that *hachimijiogan* (Kidney-Qi Pill) and *bakumijiogan* (Eight-Immortal Pill for Longevity) have the action of complete recovery of renal function in the model of chronic renal failure in 5/6 nephrectomized rats.

Yamamoto, et al. of Suzuka University of Medical Science reported that they have investigated the effect of various Kampo extracts on the in vitro inhibition of parainfluenza type 2 viral proliferation and found that *kakkonto* (*Pueraria* Decoction) and *ryokankyomishingeninto* (Tuckahoe, Licorice, Dried Ginger, Schisandra, Manchurian wildginger, Pinellia and Apicot Decoction) have a strong inhibitory activity.

Aoki, et al. of Kitasato University reported on the activity of *maoto* (Ephedra Decoction) on influenza infection in mice and explained as the mechanism that it is caused by the elevating activity of antibody titer binding to the virus.

Kagioka, et al. of Nagoya City University reported that they have investigated, using mice, the activity of Processed Aconite Root on improving neuropathic pain, a side-effect of an anticancer drug oxaliplatin with the finding that alkaloids contained are the active ingredients.

Iizuka, et al. of Yokohama College of Pharmacy reported that they have investigated the **vasorelaxant activity** of Cyperi Rhizoma in the in vitro rat great arterial vessel preparations with the finding that the methanol extract has the relaxing effect on vasoconstriction induced by norepinephrine by releasing NO.

Nariai, et al. of The University of Tokushima reported that they have isolated and identified maackiain as an anti-allergic active ingredient from Sophorae Radix with the findings that the ingredient has the improving effect on a model rat allergic rhinitis induced by toluene 2,4-diisocyanate.

Fukuda, et al. of Josai University reported that while simultaneous administration of *maoto* (Ephedra Decoction) and oseltamivir (OT) elevates plasma concentrations of OT, these formulas suppresses the onset of brain inflammation; and it has the suppressive action of OT and OT being transported into the brain.

Harada, et al. of Saitama Medical University reported that in rats, food intake decreases and gastrointestinal tract motility weakens following the cerebral ventricular administration of urcortin and these conditions can be improved by *rikkunshito* (Six Gentlemen Decoction) through the activity of this formula to improve the secretion of ghrelin.

Hyuga, et al. and Shiraishi, et al. of Kitasato University reported that *maoto* (Ephedra Decoction) extract can suppress the ability-to-move of mouse osteosarcoma cells stimulated by hepatocellular growth factors through the downregulation of the expression levels of c-Met signal and protein.

Matsui, et al. of Fukuyama University reported that they have investigated the significance of Ricorice inclusion in *daiokanzoto* (Rhubarb and Licorice Decoction) using mice with the finding that liquiritin in licorice promotes the purgative activity of sennoside A present in Rhei Rhizoma.

Nishimoto, et al. of Kitasato University reported that they have investigated the action of enhancing the expression of immune-related factors of *hochuekkito* (Middle-Reinforcing and Qi-Benefiting Decoction) in rat digestive tract epithelial cells with the finding that both lipophilic constituents and water-soluble constituents have the immunostimulatory action.

Sekiya, et al. of Kitasato University reported that *hochuekkito* (Middle-Reinforcing and Qi-Benefiting Decoction) produces the ameliorating activity in a mouse model of impaired gastric and intestinal epithelium created by the intraperitoneal administration of methotrexate with an increased level of expressions of Reg III-γ, a member of C-type lectin.

Nishimura, et al. of RIKEN reported that in order to evaluate the enhancing action of ghrelin secretion of *rikkunshito* (Six Gentlemen Decoction) by in vivo testing, (although the action has been evaluated only by in vitro testing) they have developed a method for verifying the action of *rokkunshito* by the synthesis of ghrelin having complexation with radioactive metal ⁶⁸Ga, which is then administered to the rat.

Nakagawa, et al. of Kyoto University reported that in a morphine-dependence induced mouse, *yokukansan* (Liver-Inhibiting Powder) significantly suppresses withdrawal symptoms produced by naloxone (jumping behavior, weight loss, diarrhea) and *Uncariae Uncis cum Ramulus* and licorice in *yokukansan* have the action of alpha 2 receptor antagonist.

Iijima, et al. of Nihon University reported that they have observed the increased number of endothelial progenitor cells in the blood and the reduced number of positive cells of reactive oxygen species in mononuclear cells in spontaneous hypertensive rats following the administration of *saikokaryukotsuboreito* (Bupleurum plus Dragon's Bone and Oyster Shell Decoction).

Gan, et al. of Hokuriku University reported that *bofutsushosan* (Divaricate Saposhnikovia Miraculous Powder) exhibits the antihyperglycemic action in streptozocin-induced diabetic rats and several ingredients are responsible for the activity.

Kato, et al. of Taisho Pharmaceutical Co., Ltd. reported that *Lycii Cortex* improves, through the serotonin nervous system, attacking behavior in mice induced by isolation rearing and it gives the anti-stress action.

Nakazawa, et al. of Tohoku Pharmaceutical University reported that hirusutine contained in *Uncariae Uncis cum Ramulus* gives the onset of antipsychotic action mediated by the inhibiting action of σ_1 , D2 and 5-HT_{2A} receptors.

Oda, et al. of Keio University reported that they have evaluated the in vitro anti-inflammatory action of magnolol contained in *Magnoliae Cortex* and metabolites of magnolol, using macrophages with the finding that only magnolol is active and the metabolites have no anti-inflammatory action.

Pak, et al. of University of Toyama reported that loganin contained in *Corni Fructus* has the improving action of oxidant stress, inflammatory response, and apoptosis in the spontaneously diabetic mouse models in db/db mice.

Medical History in Japan

*"Historical Significance of the Standardization of Acupoint Locations", the Second Japanese Acupoint Committee (2)
"Detailed Guide to the Location of Acupoints" from the classics to the WHO standardization", pp 411-422, Tokyo, Ishiyaku Publishing, June 2009 (partially revised)*

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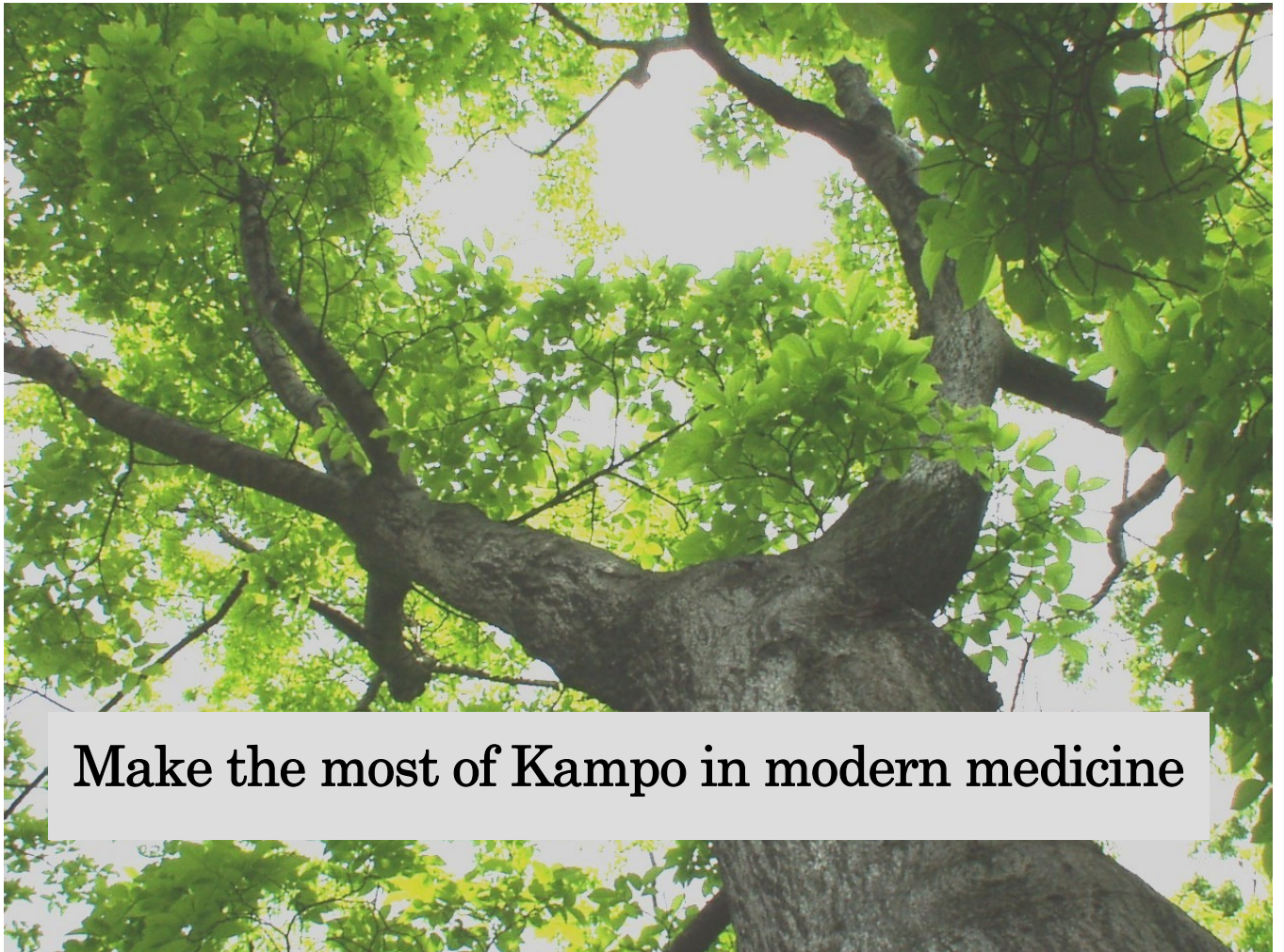
(continued from KAIM Journal vol.6 no.1)

2. Secondary standardization – unification on the level of meridians and acupoints

The meridian concept has developed and been fused during the above described circumstances, but there were differences between schools etc., so that the progressive spread of acupuncture and moxibustion therapy made a unification of the concepts necessary. And approximately one century after the forerunner of the "Su Wen" and "Ling Shu" had been edited, the concepts pertaining to meridians and acupoints were unified. The form of the "Su Wen" and "Ling Shu" we see today is not a document of that time, but rather the product of extensive modification and from a considerably later time. However, some of the contents have unmistakably be transmitted from entries in the Mawangdui medical texts and thus can definitely be traced back to before the common era. Astronomical knowledge was adopted to render the concepts of meridians and acupoints in the original form of the "Su Wen" and "Ling Shu" from the first century absolute. At that time it was accurately recognized in astronomy that there are 12 cycles of waxing and waning of the moon and about 365 days in a year and these figures accepted as absolute truth. From those absolute figures of heaven the figures of man were deducted and thus the unification of the meridians and acupoints planned. The astronomical concept of the yin-yang theory and the five element theory were used as the theoretical basis for this work. Moreover, the "heaven-earth-man" (tian-di-ren) trinity theory was also used and thus the figures 6, 12 and 360 put on a logical

foundation. During that process yin and yang were further divided into three yin and three yang resulting in a concept found only in medicine but not elsewhere in Chinese philosophy or thought. In this way the concept of the six viscera and six bowels from the "Su Wen" and "Ling Shu" and the corresponding concept of the twelve regular meridians were unified and standardized. Moreover, because this was important in order to create a yet another system also comprising the conception and governor vessel explaining the production of their offspring, those were placed on the same level as the twelve regular meridians and now form the basis of the modern meridian concept.

On the other hand, since the modern form of the "Su Wen" and "Ling Shu" refer repeatedly to the number acupoints as being 365, the forerunners of both texts from the first century most likely mentioned these too. However, the actual number of points given in both works does not exceed 132 points [5]. This reveals that by the first century only about 130 points had been developed, but based on deductions from the numbers of heaven the figure 365 was standardized into the ideal concept.



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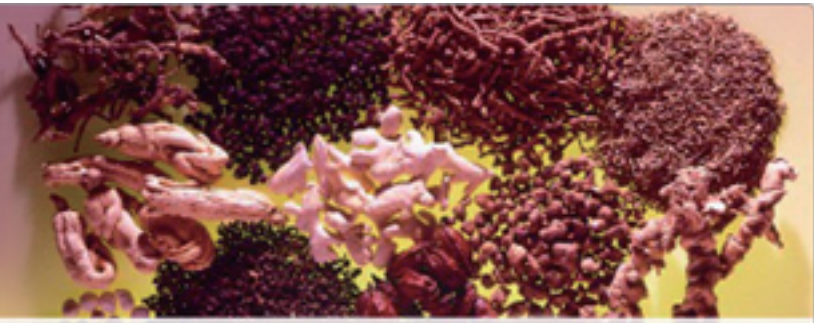
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