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TABLE OF CONTENTS

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.

Foreword

Introduction of Kampo and Acupuncture in Japan

Japan has long-standing historical ties to China and Korea. The traditions of Kampo and acupuncture originally came to Japan from those two nations. However, once in Japan, these therapeutic modalities and medical philosophies developed in uniquely Japanese ways, and over the years have become familiar and comfortable to the Japanese people.

These traditional forms of medical therapy have a long history in Japan, coming originally from China by way of the Korean peninsula, reaching the Japanese islands together with Buddhism in the 6th century. Such traditional practices, both Kampo therapy and acupuncture and moxibustion, were a part of standard medical treatment in Japan until the end of the Edo Period. However, Japan moved toward westernization/modernization in the second half of the 19th century. A rapid introduction of modern Western medicine began with the Meiji Restoration (1868) and traditional Japanese medicine fell into decline. Following World War II, while Japan was under the control of the occupying GHQ, a movement was initiated within the GHQ to ban acupuncture as an unscientific, superstitious, and barbaric form of treatment. This put Japanese traditional medicine at an even greater risk of dying out completely. However, since the time of the Showa Era (1925-1989), there has been an ongoing movement to reinstate some forms of traditional medicine in Japan. Both Kampo medicine and acupuncture therapy have survived and continue to be practiced today.

Because teaching and research in Japanese universities have been based on modern Western medicine since the beginning of the Meiji Era, medical practitioners who are licensed physicians provide treatment from the perspective of modern Western medicine only, and do not generally interact with practitioners of traditional Japanese medicine such as Kampo doctors and acupuncturists. The two traditions continue to exist in parallel, but do not touch.

The shortage of EBM-based scientific evidence for Kampo and acupuncture has made it even more difficult to obtain a fair-minded hearing for Kampo or acupuncture-related research objectives to be added to the Japanese government's research budget. In fact, from the Meiji Restoration until the present day, Kampo and acupuncture have continued to receive a cool reception from the Japanese medical establishment with regard to therapeutic services, as well as in terms of physician training and the overall health care system.

What will be required in order to change this status quo?

First, we must accumulate research that demonstrates the scientific rationale for Kampo and acupuncture from an EBM perspective. We will also need to collect and organize case reports substantiating that research.

Second, it is essential that these Japanese findings be made available for assessment by the international medical community. This will be helpful for the domestic status of traditional Japanese medicine, since Japan tends to be strongly influenced by overseas opinion, particularly from the United States and Europe. Japanese people tend to place more weight on positive evaluations by Europeans and Americans than they do on similar evaluations by other Japanese. This tendency is particularly pronounced in the Japanese academic and medical communities. It is important to obtain a positive assessment from Europe and America even for beneficial Japanese traditions of long standing. This is an important step for revitalizing Kampo and acupuncture in Japan. We hope that this journal will be one means to that end.

Unfortunately the traditions of Kampo and acupuncture, which have been a valuable part of Japanese health care for so many years, are currently failing to receive either unbiased evaluation or fair treatment by the Japanese medical establishment. We hope that through this journal we can help to establish Japanese Kampo and acupuncture as independent from their Chinese and Korean cousins, and that we can contribute in some small way to increasing the understanding of Japanese traditional medicine overseas.

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Japanese Acupuncture - Current Research

Clinical Study of Low Frequency Electroacupuncture Therapy (EAT) for Treatment of Cervical Radiculopathy

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Key words: cervical radiculopathy, acupuncture, muscle EAT, nerve EAT

I. Introduction

Low frequency electroacupuncture, where the inserted needles are used as electrodes, is a treatment form using low frequency electrical stimulation, and as such, one variant of acupuncture therapy. Currently, low frequency electroacupuncture is most frequently used in clinics for diseases and symptoms in the field of orthopedics and here, in particular, nerve pulse treatment has in recent years found wide application[1,2,3,4,5)]. Originally, low frequency electroacupuncture based on muscle pulse therapy, was used for these diseases and symptoms. For conditions in which muscle pulse therapy remained ineffective, the application of electroacupuncture on the damaged nerves reportedly resulted in improvements of the symptoms[3)], so that this nerve pulse therapy was proposed to be effective and thus started to come into general use. When low frequency electroacupuncture is performed in daily clinical practice, muscle pulse therapy is usually the treatment of first choice based on the degree of difficulty of the needling. In case the muscle pulse therapy is ineffective, the method is switched to the nerve pulse therapy. However, this decision is largely based on experience and it is thus desirable to provide constant evaluation criteria for the decision.

Yet, there have been no reports examining the clinical aspects of both muscle pulse therapy and nerve pulse therapy. We have investigated the clinical effects of both muscle pulse therapy and nerve pulse therapy in the treatment of patients with cervical radiculopathies.

II. Materials and Methods

1) Materials

Subjects of the study were 41 patients diagnosed with cervical radiculopathy based on their subjective symptoms, positive findings of the physical examination as well as x-p and MRI findings. In the patients with cervical radiculopathies included in this study, head compression tests like the Jackson or Spurling tests reproduced the pain in the arm. Patients who had loss of muscle power, weakened tendon reflexes, dysaesthesias and similar neurologic anomalies were observed. Those in whom the head compression test was negative, or who presented only neck pain, were excluded from the study.

2) Selection criteria for either muscle pulse therapy or nerve pulse therapy during the application of low frequency electroacupuncture

The first choice of treatment for all 41 patients was muscle pulse therapy. In patients in whom the pain score dropped to less than 5 points after one month of continuous treatment (10-point system), muscle pulse therapy was continued (muscle pulse therapy group). Yet, for patients in whom the pain score improved only down to 6 points, the therapy was switched to nerve pulse therapy and then continued (nerve pulse therapy transition group). The consent of the patients was obtained for the switchover from the muscle pulse therapy to the nerve pulse therapy.

As a result, in the end the muscle pulse therapy group included 24 and the nerve pulse therapy transition group 17 patients. No significant differences regarding patient age or duration of morbidity among the groups were observed. Table 1 shows the profiles for both groups.

	Muscle-EAT n=24	Nerve-EAT n=17
Sex	male 15, female 9	male 11, female 6
Age	51.6±10.8	48.3±9.2
Duration (days)	99.9±152.8	71.5±88.5
Head compression test	24	17
Sensory disturbance	8	7
Muscle weakness	5	0
Abnormality in deep tendon reflex	4	1

Table 1: Profile of the patients

3) Low frequency electroacupuncture for the treatment of cervical radiculopathy

In order to apply low frequency electroacupuncture for the treatment of cervical radiculopathy, the level of the responsible lesion was determined based on the subjective symptoms as well as the findings of physical examination and diagnostic imaging. The treatment was then performed with the purpose of achieving a change in muscle tension and circulation in the vicinity of the affected nerve root. Regarding this therapy, the muscle pulse therapy consisting of needling the spaces between the spinous processes directly lateral and superior to the level of the affected nerve root as well as choosing distal points on the affected side, using the needles as electrodes for the application of a low frequency electrical stimulation, has also been called the "acupuncture anesthesia method"[6]. For example, during application of an electric current to needles placed immediately lateral and inferior to the 5th cervical spinous process and the point Gokoku (Hegu, LI4) between the thumb and index finger for stimulation of the sixth cervical nerve, mild muscle contractions of the fingers of the hand were observed (Fig. 1-A). For the nerve pulse therapy, the needles are inserted into close proximity of the nerve root and then used as electrodes for the application of a low frequency electrical stimulation (Fig.1-B). Needles with a length of 50 mm and a diameter of 0.2 mm (Japanese-made 1 sun 3 bu, No.3 needles) were used. For the nerve pulse therapy[7] the needles were inserted in the same way as for the muscle pulse therapy into the spaces between the transverse processes with another needle (needle serving as an indifferent electrode). After obtaining referred pain within the region of the innervation of the particular nerve root, current was applied to the needle inserted in the neck. The current was applied, after confirming, that mild contractions of the peripheral muscles innervated by that nerve were observed.

Figures 2-A, B show needling of what was considered to be the region of the nerve root C_6, applying a low frequency current of 1 Hz and after confirmation of the induction of mild contractions of the thumb the position of the needle tip was ascertained through CT imaging. Based on the results, Ebraheim[8] classified three compartments of the sulcus for the spinal nerve root (medial, central and lateral compartment), according to which the needle tip can be confirmed to be positioned in the lateral compartment of the exit of the intervertebral foramen. For the low frequency electrical stimulation used for the muscle and nerve pulse therapies, a frequency of 1 Hz was used and applied over a period of 15 minutes. Treatment frequency was one to two times per week.

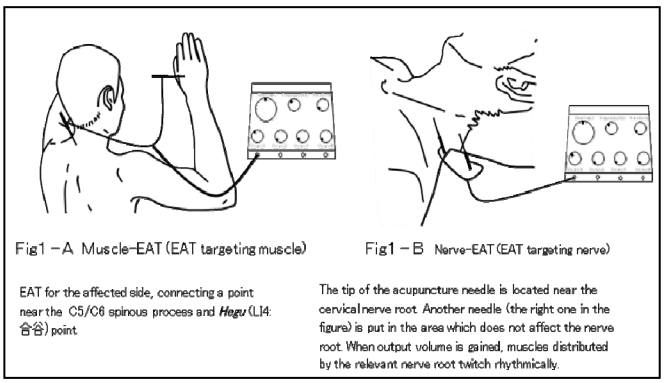

Fig1－A Muscle-EAT (EAT targeting muscle)

EAT for the affected side, connecting a point near the C5/C6 spinous process and *Hegu* (LI4: 合谷) point.

Fig1－B Nerve-EAT (EAT targeting nerve)

The tip of the acupuncture needle is located near the cervical nerve root. Another needle (the right one in the figure) is put in the area which does not affect the nerve root. When output volume is gained, muscles distributed by the relevant nerve root twitch rhythmically.

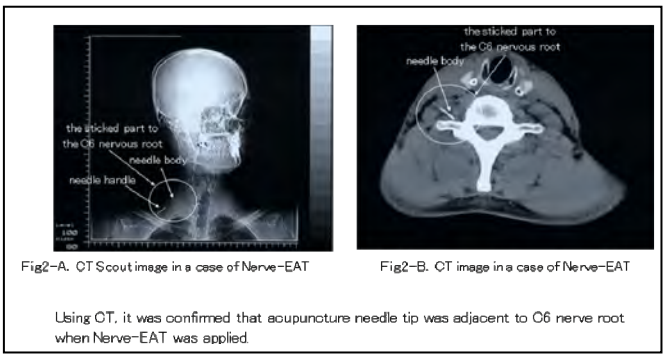

Fig2-A. CT Scout image in a case of Nerve-EAT

Fig2-B. CT image in a case of Nerve-EAT

Using CT, it was confirmed that acupuncture needle tip was adjacent to C6 nerve root when Nerve-EAT was applied.

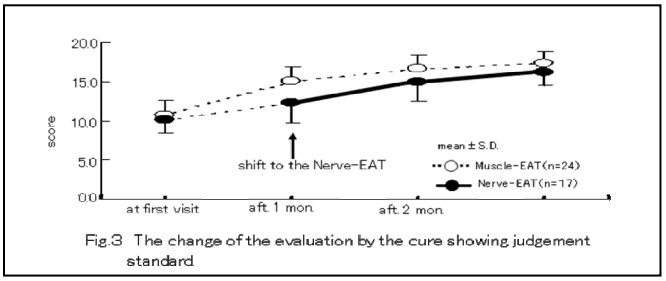

Fig.3 The change of the evaluation by the cure showing judgement standard

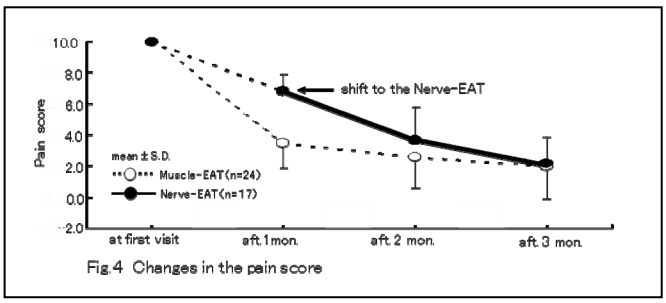

Fig.4 Changes in the pain score

4) Evaluation

Evaluation of the acupuncture treatment for radiculopathy follows the evaluation criteria for the therapeutic results of treatment for cervical radiculopathies[9] proposed by Tanaka et al. of Tohoku University, evaluating the condition monthly from the first visit until after the third month. The evaluation criteria proposed by Tanaka et al. comprise a total score of 20 points, including the following four items: subjective symptoms (0-8 points), ability to work or do household chores (0-3 points), functions of the hand (-2-0 points), objective symptoms (0-8 points).

Moreover, since Tanaka et al. consider improvement of the subjective symptoms in patients with radiculopathies to be very important[15], these were also evaluated with a pain score.

Statistical processing

The Mann-Whitney U-test was used for the testing of group differences, while the Bonferroni/Dunn method was used for the analysis of the values obtained at the initial stage and at each following examination for a multiple comparison test. Stat View 4.5 was used as the statistical software and the level of significance defined as $p<0.05$, $p<0.01$.

III. Results

1) Evaluation based on the evaluation criteria for the therapeutic results of treatment for cervical radiculopathies

Fig. 3 shows the results of muscle pulse therapy and nerve pulse therapy obtained from the initial visit until after the third month based on the evaluation criteria for the therapeutic results of treatment for cervical radiculopathies. The figure shows, that in the muscle pulse therapy group, the score at the first visit was 10.7±2.0 points (mean ± standard deviation), after 1 month the score improved to 15.0±1.9 points and after 3 months to 16.9±1.1 points ($p<0.05$). On the other hand, in the nerve pulse therapy transition group, the score at the first visit was 10.1±1.7 points, after 1 month the score improved to 12.3±2.6 points and after 3 months to 16.9±1.1 points, indicating a significant improvement between the initial test and the test after 3 months ($p<0.05$). Subsequent examination of the differences between the groups showed that while no significant difference was observed in the test results at the first visit, relevant significant changes ($p<0.05$) were observed after one month. However, after 3 months no significant changes were observed. In other words, 1 month after initiation of the treatment in the muscle pulse therapy group and nerve pulse therapy transition group, a difference in therapeutic results was observed, that disappeared again after 3 months of treatment, so that after 3 months the same therapeutic effects were obtained in both groups.

2) Variations in the pain score

Fig. 4 shows the variations in the pain score. In all patients the average pain score after 1 month was 5.2±2.5 points and thus showed a significant ($p<0,05$) improvement over the score at the first visit. Yet, if both groups were examined separately, the score in the muscle pulse therapy group was 3.5±1.6 points and in the nerve pulse therapy transition group 6.8±1.0 points. Improvement in the nerve pulse therapy transition group when compared to the muscle pulse therapy group was not as significant. A significant difference ($p<0,05$) was observed between the two groups. Although after one month of continuous therapy in the nerve pulse therapy transition group, an effective improvement had been achieved by the muscle pulse therapy as described above. In the group switched to the nerve pulse therapy the score after one month was naturally higher than in the muscle pulse therapy group. Yet, one month after switching to the nerve pulse therapy, that means 2 months after the first visit, the pain score in the muscle pulse therapy group was 2.6±2.0 points and in the nerve pulse therapy transition group 3.7±2.1 points, indicating a reduction in the difference between the two groups. After three months (that is two months after switching to the nerve pulse therapy) the score in the muscle

pulse therapy group was 2.0±2.1 points and in the nerve pulse therapy transition group 2.2±1.7 points, indicating that in both groups the same effect had been achieved.

IV. Discussion

Tanaka et al.[9] used their own evaluation criteria for the therapeutic results to examine the effects of conservative therapy in 43 patients with cervical radiculopathies. The results showed a score of 6.0 points at the first visit, that reportedly increased after three months of treatment to 11.9 points and after 4 months to 13.1 points. Yet, for patients who had 4 months of treatment and a score of less than 8 points continued conservative treatment, could not be expected to result in a subsequent favorable outcome. The authors stated that for patients with scores ranging between 9-13 surgery could also be considered.

We investigated the therapeutic results obtained with low frequency electroacupuncture based on the evaluation criteria of Tanaka et al. and found in the muscle pulse therapy group after 3 months an improvement of the score to 16.9 points and in the nerve pulse therapy transition group to 15.9 points. The condition could be regarded as having improved so far that surgery was not necessary. Yet, looking at the score at the first visit showed that Tanaka et al. patients had a score of 6.0, while the patients of the muscle pulse therapy group in this study had a score of 10.7 points and in the nerve pulse therapy transition group of 10.1 points. While Tanaka et al. excluded patients, who underwent treatment at other medical facilities, and included only those in whom the condition had developed within the last 2 months, the present study also included patients in whom the condition had lasted longer than 2 months and who were treated otherwise prior to the treatment with low frequency electroacupuncture. The difference in the score at the first visit probably reflects these circumstances. In either case, the patients included in this study were presented with milder conditions than those observed by Tanaka et al. Moreover, Tanaka et al.[10] observed among their cases with radiculopathy, a high ratio of patients with dysaesthesias, loss of muscle power and decreased tendon reflexes, reporting a ratio of 86% of dysaesthesia, 69% of loss of muscle power and 67% decreased tendon reflexes respectively among their 300 patients with radiculopathies. In contrast, dysaesthesias were found in as few as 15 (37%) out of the 41 cases included in this study, loss of muscle power in 5 patients (12%) and decreased tendon reflexes also only in 5 patients (12%), revealing that the neurologic findings too were of lesser severity than those reported by Tanaka et al. Based on these findings a comparison with the results of the conservative treatment implemented by Tanaka et al. was considered to show that the results of the low frequency electroacupuncture were better.

Regarding the effects of the muscle pulse therapy and the nerve pulse therapy, examination of the pain score revealed that the score after one month of treatment in the muscle pulse therapy group was 3.5±2.2 points and in the nerve pulse therapy transition group 6.2±1.8 points. At this point in time a significant difference between the two groups was observed, showing a clearly higher score in the nerve pulse therapy transition group. In other words, the score difference between the groups shows that in patients with higher scores, the treatment was switched from the muscle pulse therapy to the nerve pulse therapy, rendering these results inevitable. Yet, after 3 months of treatment, significant differences between the muscle pulse therapy group and the nerve pulse therapy transition group were no longer observed. These findings suggest that the condition in patients who showed resistance towards muscle pulse therapy, may be improved by nerve pulse therapy. The same thing may be said about the application of evaluation criteria for the therapeutic results.

Regarding the mechanism of onset of root pain, Hirabayashi[11] suggested, that it may be due to mechanical stimulation (pressure + friction) →

circulatory disturbances (edema) → radiculitis. Moreover, the nerve roots together with the ganglia are said to be characterized by their high vascular permeability, so that the influence of circulatory disturbances on nerve and connective tissues may elicit edema induced swelling of the nerve fibers. These lesions may then lower the stimulation threshold so that even minimal stimuli will elicit pain.

Also, Kobayashi et al.[12,13] created in animal (dogs) experiments a model of the pathology of entrapment neuropathy and observed lesions of the nerve roots. The results showed a marked decrease in radicular blood flow and conductivity in association with mechanical compression, making it clear that edema develops within the roots. Moreover, stagnation of intraaxonal flow and accumulation of SP (substance P) and CGRP in primary afferent fibers were observed and disturbances of the axoplasmic flow reported. The capillaries of the nerve root are innervated by nerve fibers containing SP and various other types of nerve activating substances. Since these substances are involved in radicular blood flow regulation, the accumulation of SP and CGRP and similar substances due to decreased axoplasmic flow causes inflammation and thus conceivably promotes the development of intraradicular edema. Also, Takahashi et al.[14] observed the blood flow in the lumbar spinal cord and nerve roots with a temperature gradient tissue blood flow meter following stimulation of the sciatic nerve using 20 Hz, 20 V, 0.5msec pulses in animal (dogs) experiments. The results revealed a reactive increase in blood flow in this region. Also, based on the results of these experiments, this research attempted to apply transdermal electrostimulation of peripheral nerves for ischemia of the cauda equina and nerve roots as one of the symptomatic manifestations and found this treatment to be effective in 56 out of 67 (83%) patients with radicular pain[15].

Consideration of the modes of action of the nerve pulse therapy, based on the hypotheses of Hirabayashi et al. and Kobayashi as well as the experimental results from Takahashi et al., allows to assume, that one of the mechanisms, namely the improvement of the nerve blood flow, is related to the alleviation of the symptoms. There are no reports dealing with low frequency electroacupuncture induced variations in nerve blood flow in humans, but in animal experiments the low frequency electroacupuncture stimulation of nerves reportedly led to a significant improvement of the nerve blood flow[16,17]. Moreover, Kasuya[4] and Inoue[5] et al. reported that application of low frequency electroacupuncture to the nerves or nerve roots to be effective for the improvement of refractory pain and numbness caused by lumbar spinal canal stenosis. Regarding this mechanism, the authors agree with Inoue et al., who mentioned the increased nerve blood flow.

Concerning the use of muscle pulse therapy and nerve pulse therapy based on the above described results, the application of muscle pulse therapy in cases of cervical radiculopathies was the first treatment stage, and if this did not produce certain clinical effects, switching to nerve pulse therapy was considered to be appropriate.

V. Conclusions

1) Comparison of muscle pulse therapy and nerve pulse therapy for the treatment of cervical radiculopathies showed in both groups a significant improvement between the first visit and after 3 months of treatment, the improvement being of approximately the same degree in both groups.

2) The nerve pulse therapy transition group refers to those patients in whom, in spite of one month of continuous treatment with the muscle pulse therapy, no effects were obtained. One month after treatment began there was a significant difference between the groups, but after 3 months approximately the same degree of improvement had been achieved in both groups.

3) This suggests, that in patients in whom treatment with muscle pulse therapy had been ineffective, improvements of the symptoms can be achieved by application of nerve pulse therapy.

References

1) Kitakoji H, Kitamura S, Matsuoka K, et al.: Anatomical Studies pertaining to Acupuncture treatment of the Pudendal Nerve. Journal of the Japan Society of Acupuncture and Moxibustion; 1989; 39 (2): 221-228
2) Sakai T, Sugita M: Acupuncture Therapy for Locomotor Diseases – in particular concentrating on cervical spondylosis – J.J.A. Phys. M. Baln. Clim. 1993; 57(1): 41-43
3) Anno F, Yoshida A, Sakai T: Aged Patients and Oriental Medicine (5) – acupuncture treatment for peripheral arterial obstructive diseases, in particular obstructive arteriosclerosis – Physical Therapy, 1998; 28 (1): 2-9
4) Kasuya D, Takeuchi F, Yamamoto K, et al.: Clinical Study on Acupuncture Therapy for Lumbar Spinal Canal Stenosis; J.J.A. Phys. M. Baln. Clim. 1999; 62 (4): 201-206
5) Inoue M, Hojo T, Katayama K, et al.: Application of Electroacupuncture at the Lumbar Nerve Root as Treatment for Radiculopathy Induced Sciatica. The Bulletin of Meiji University of Oriental Medicine; 2002; 20: 1-8.
6) Serizawa K: Cervicobrachial Syndrome. J.J.A. Phys. M. Baln. Clim. 1979; 43 (1,2): 29-34.
7) Sakai T: Treatment of Cervico-omo-brachial Pain with Low Frequency Electroacupuncture. Therapeutic Encyclopedia classified by diseases, Vol. 3, Cervico-omo-brachial pain, Ido no Nihon, Tokyo, 2000; 141-146
8) Ebraheim NA, An HS, Xu R, et al.: Quantitative anatomy of the cervical nerve root groove and the intervertebral foramen. Spine 1996; 21: 1619-1623.
9) Tanaka Y, Kokubu S, Sato T, et al.: Results of conservative treatment for cervical radiculopathy and their prediction. Orthopaedic Surgery and Traumatology. 1997; 40: 167-174.
10) Tanaka K, Kokubu M: Symptom Based Diagnosis of Cervical Radiculopathy and cervical myelopathy. NEW MOOK, Orthopedics No. 66; Kanehara Publication, Tokyo, 1999; 30-38
11) Hirabayashi K: Treatment of Radiculopathy. Orthopedics MOOK, No. 6; Kanehara 1979, Publication, Tokyo, 231-234
12) Kobayashi S, Yoshizawa E, Hachiya H, others: Pathophysiology of Nerve Root Compression Disorders; Spine and Spinal Chord 1991; 4 (2): 109-120; unknown
13) Kobayashi S, Yoshizawa E, Yamada M: Immunohistochemical study on nociceptive neuropeptides in relation to nerve root compression. Journal of Clinical and Experimental Medicine. 1993; 164(2): 115-119.
14) Takahashi K, Nomura S, Tomura K, et al.: Effect of peripheral nerve stimulation on the blood flow of the spinal cord and the nerve root, Spine 1988; 13: 1278-1283.
15) Takahashi K, others: Effects of electrical stimulation of peripheral nerves on the blood flow in nerve roots and the spinal chord; Orthopedics, independent volume, 1990; 18: 99-102
16) Inoue M, Katsumi Y, Kawakita K, et al.: Effects of Lumbar Acupuncture Stimulation and Sciatic Nerve Electrical Stimulation on Blood Flow to the Sciatic Nerve Trunk. Journal of Japan Society of Acupuncture and Moxibustion. 1998; 48(2): 130-140.
17) Inoue M, Hojo T, Ikeuchi T, et al: Effects of Electroacupuncture Treatment of the Pudendal Nerve for Intermittent Claudication due to Lumbar Spinal Canal Stenosis. Journal of Japan Society of Acupuncture and Moxibustion; 2000; 50(2): 11-19.

Kampo Medicine - Current Research

Use of Kampo Medicine in Treatment of Influenza

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1. Introduction

Influenza is one of the most common conditions encountered in a clinical setting. The disease is widespread during the winter months, sometimes reaching pandemic proportions. Vaccination against influenza has become commonplace in the developed nations in recent years, which has led to a reduction in flu epidemics,. With the development of medications such as oseltamivir phosphate (Tamiflu®) that are particularly effective against the influenza virus, the period required for recovery from influenza infection can be considerably shortened. Nevertheless, an influenza infection can be quite serious for the afflicted patients, frequently requiring several days' absence from work or school.

It is also possible that a particularly virulent form of influenza causing a cytokine storm, such as the Spanish Flu in 1918, could again reach pandemic proportions and cause worldwide panic. In fact, that probability is actually quite high. If we are ever faced with such a pandemic, Kampo should prove to be particularly useful because of its long history as an effective intervention for the treatment of influenza even during major epidemics.

Here we introduce the use of Kampo medicine in the treatment of ordinary influenza, and discuss responses to a new and potentially more virulent influenza epidemic.

2. The Disease-Causing Elements of Influenza

The textbook description of influenza symptoms generally includes high fever, accompanying severe chills, headache, and joint pain, along with sore throat, pharyngeal erythema, and sometimes a severe cough. From a Kampo perspective, the symptoms of chills, fever, headache, and joint pain are the result of an intense battle between disease-causing elements and the vital principle, occurring because of the invasion of wind-cold with predominance of cold.

The sore throat accompanied by pharyngeal erythema is the result of heating within the body caused by wind-cold. Regardless of whether or not internal heat is present, this heating is assumed to be intrinsic within the disease-causing element itself. When there is a cough beginning in the early stages of illness, that cough is judged to be a manifestation of the characteristics originally present in this element.

That is to say, the element that causes influenza should not be considered as a simple cold element, but instead as an influenza-specific element that characteristically generates heat as soon as it enters the body and directly invades the lungs. Although this element has the intensified characteristics of cold, it can be considered a type of "epidemic pathogen", an element of infectious disease similar to the pestilence.

3. Are “Cold Damage” and Influenza the same condition?

Kampo treatment for influenza very commonly utilizes “*Shang Han Lun (Treatise on Cold Damage Diseases)”* formulations. These formulations are effective in most cases. However, the conditions of "cold injury" and influenza, although similar, are not identical. "Cold injury" is not fundamentally associated with sore throat, and is not necessarily accompanied by coughing. Other symptoms are very similar to those for influenza, so "cold injury" is presumed to be a special form of influenza.

The preface to *Shang Han Lun (On Cold Damage)* notes, "I had a very large family, over 200 people. However, within 10 years after the start of the Jian'an Era (196 AD), two-thirds of them had died, and seven out of 10 of those deaths were due to 'cold damage'." In other words, during a ten-year period about 100 people in that family died from "cold damage". That would mean about 10 deaths per year would be ordinary. However, if there were 50 deaths per year for two years, that would be a pandemic.

The same virus can manifest with different

symptoms depending on the area and season of contagion. It is also unlikely that antigenicity will be absolutely the same in different locations and during different seasons. In Japan in 1918, the "Spanish flu" generally started out with "chills and shivering, followed quickly by fever, with the simultaneous development of localized symptoms such as pharyngeal erythema, pain, and cough." [1] At the same time, Keegan (JAMA, Vol. 71, No. 8) states that the early-stage pharyngeal symptoms may be omitted, with the patient simply showing a fever and general symptoms, and that this is considered characteristic of influenza in the United States [1], indicating that when viewed on a worldwide scale influenza manifests with a wide diversity of symptoms. The contents of Keegan's report are very similar to descriptions in the "*Shang Han Lun*". As will be discussed later, formulations that are used for "cold injury" are also extremely effective against influenza.

A useful book for reference in this area is John Barry's "*The Great Influenza*", which details the stories of patients during the Spanish flu epidemic of 1918. "Patients cried from joint pain. They suffered from high fever and chills, shaking under their blankets. They complained of abdominal pain, and vomited repeatedly." (From the Japanese translation, retranslated into English) [2].

This description is very similar to the "*Shang Han Lun*", which states that "Greater Yang Disease, with or without fever, but always with chills, complaints of pain in areas such as the joints, vomiting, and tense pulse, is termed 'cold injury'". Given this, it seems likely that the "cold injury" described by Zhang Zhong-jing in the preface to the "*Shang Han Lun*" was a variation of influenza.

4. Research into the Treatment of Influenza with Kampo Medicine

Experientially, influenza responds well to Kampo therapy, and considerable clinical research is currently underway or has been completed. Some typical examples are described below.

Research by Kawamura [3]

Kawamura selected 129 patients (0.5 to 14.6 years of age) who tested positive with the influenza rapid diagnosis kit between February 22 and June 13, 2007. These patients were divided into four groups for treatment: type A-flu oseltamivir group, the type A-flu *maoto* group, type B-flu oseltamivir group, and type B-flu *maoto* group. Kawamura's results showed *maoto* to be as effective as oseltamivir, and to be particularly effective against type B influenza.

Research by Kubo and colleagues [4]

Kubo and colleagues treated 49 patients five months to 13 years of age (24 boys and 25 girls) who had influenza-like symptoms including fever of 38°C or above, divided into an oseltamivir monotherapy group (18 patients), a *maoto* + oseltamivir concomitant use group (14 patients) and a *maoto* monotherapy group (17 patients), and investigated the effects of treatment in each group. Of these patients, those one year of age or older who had been diagnosed with influenza using a means such as the rapid diagnosis kit, were randomly allocated between: (1) the oseltamivir (trade name Tamiflu) group (4 mg/kg/day, divided into two daily doses), (2) *maoto* (Tsumura & Co., Ltd., Tokyo, Japan) 0.18g/kg/day, divided into three daily doses) + oseltamivir concomitant use group. Patients less than 1 year old, for whom oseltamivir is not indicated, and patients who tested negative for influenza with the rapid diagnosis kit, were placed in, (3)*maoto* monotherapy group. The parent or other caregiver was asked to provide information about any medications being used and records of body temperature, and the time from the start of treatment until the fever was resolved (body temperature of 37.2°C or below) was compared among these groups. There were no differences among the groups with regard to patient characteristics such as mean age at the start of treatment, male/female ratio, duration of fever before first treatment, degree of fever, or history of preventative inoculation. Meantime, resolution of fever was 31.9 hours in the oseltamivir monotherapy group, 21.9 hours in *maoto* + oseltamivir group, and

17.7 hours in *maoto* monotherapy group. No adverse drug reactions or other adverse events were observed in any of the groups treated.

Research by Kuroki [5]

Kuroki investigated the effects of concomitant use of oseltamivir and *maoto* in the treatment of influenza during three influenza seasons from 2003 through 2005. Results showed excellent improvement in clinical symptoms in the concomitant therapy group, but the change in the amount of time required to relieve fever was not as significant.

Research by Fukutomi and colleagues [6]

Fukutomi and colleagues enrolled 24 patients who were diagnosed with influenza based on findings from the rapid diagnosis kit. Those patients were divided into two groups and treated as described above. Their results showed a significant reduction in the number of days of persistent headache and general malaise in the group treated with oseltamivir + *maoto* in comparison to the group treated with oseltamivir only.

Research by Kimoto and colleagues [7]

From January through March of 2004, Kimoto and colleagues administered oseltamivir to patients who were diagnosed with influenza on the basis of findings from the rapid diagnosis kit, and compared the clinical course for those patients receiving concomitant treatment with *maoto* in comparison to patients receiving ordinary concomitant therapy in the context of Western medicine. Fever was resolved approximately 12 hours sooner in the *maoto* concomitant use group than in the Western medicine concomitant use group, and fatigue, dizziness, lightheadedness, and anorexia also tended to be improved more rapidly in the *maoto* group. Elevated CRP was noted in three patients in the Western medicine concomitant use group. There were no such adverse events in the *maoto* concomitant use group.

These studies show that *maoto*, although its mechanism of action is completely different from that of oseltamivir phosphate, provides a very similar level of clinical effectiveness, and that the effectiveness of treatment is further potentiated by concomitant administration of both agents. The research by Kubo and colleagues, which found *maoto* monotherapy to be more effective than treatment either with oseltamivir alone or oseltamivir + *maoto*, also showed that the effectiveness of such treatment was increased if the agent was administered very early in the course of illness. *Maoto* was used in these studies because the majority of researchers performing the studies were pediatricians.

Maoto is more commonly indicated for use in children than in adults. As can be seen from the research reported here, *maoto* does not require careful selection of patient conditions, and is safe for use as long as it is administered as instructed. *Maoto* is a typical agent that resolves fever by warming the body. Its primary ingredient is *Ephedra* Herba, which contains ephedrine. *maoto* is used in the treatment of chills, fever, headache, arthralgia, and myalgia in cases where the patient shows no spontaneous sweating and has a floating and tense pulse. The method of administration is in accordance with the chapter on *maoto* in the "*Shang Han Lun*". After administration, the patient should be covered and kept warm. Treatment is generally repeated every two hours until sweating begins, but is usually effective even if given only every three to four hours. After administration there will be a transient rise in body temperature, and the patient should be monitored closely for the development of febrile seizures and impaired consciousness. Administration should be discontinued as soon as the patient begins to sweat. This is because sustained sweating can lead to dehydration.

The ordinary course of treatment is as described above. In most cases, children show the diagnostic criteria of *maoto* chapter when they first develop influenza. However, caution is advised because there are rare instances of lesser yin disease, in which there is no chilling, and also influenza can develop with many elements of warm disease, so *maoto* monotherapy is not always the optimal choice for treatment.

Adults tend to show a wider variety of influenza types than seen in children. Symptoms may be more severe than in children, the condition may be accompanied by a sore throat and severe cough, and patients who cannot be cured early may lose appetite and waste away. Mori and Miyazaki conducted research in adult patients who were allocated into treatment groups depending on Sho diagnosis.

Research by Mori and Miyazaki [8]

Mori and Miyazaki enrolled influenza patients who came for treatment between January and April 2005, allocated those patients into three groups (Groups I, II, and III) for treatment, and determined the number of days until recovery occurred in each patient. The results were as follows.

Group I (oseltamivir + Kampo concomitant use group, 20 patients). Time to recovery: 3.4 days

Group II (oseltamivir + Kampo, escalated dose/frequency of administration group, 25 patients). Time to recovery: 2.0 days

Group III (oseltamivir monotherapy + concomitant Western medical treatment group, 29 patients). Time to recovery: 6.3 days

In adults, *shoseiryuto* is generally indicated for the early stages of influenza. Agents that may be prescribed other than *maoto* and *daiseiryuto* include *keishimaoukakuhanto*, *keishinimaoichito, keishinieppiichito, maobushisaishinto*. For cases transitioning into lesser yang disease, agents such as *saikokeishito* and *shosaikoto* may be considered. If the condition transitions to yang brightness disease, *byakkoto* chapter may develop. In cases of severe cough, *makyokansekito* or *chikujountanto* should be considered. Deficiencies in both qi and yin frequently develop during the recovery period, so the use of *bakumondoto* and *shakanzoto*, which are beneficial for the lung, may be useful. Since very few Western treatment modalities address this stage in the recovery process, these Kampo formulations can provide a valuable contribution to patient healing. If warm disease develops, the patient should be treated with *gingyosan* or a similar agent to cool fever and eliminate surface elements of disease. *gingyosan* is not available in extract formula of ethical use, but nearly the same effects can be obtained by substituting *seijobofuto* or *keigairengyoto*.

According to announcements and releases available to date, Japanese influenza tends in most cases to be of the wind-cold type, and wind-heat variations are rare. However, there have been some reports of influenza of the warm-disease type.

5. Closing Remarks

This article has viewed influenza from a number of angles based on a Kampo medicine perspective. A variety of medical procedures are available for the prevention and treatment of influenza, from basic preventative measures such as wearing face masks and gargling to vaccination and the administration of antiviral agents such as oseltamivir. We feel that Kampo medicine offers unique advantages in this context, and that its inclusion among the medical treatment options will provide additional security in the treatment of influenza, particularly in the event of a pandemic.

References

1) Barry, J (author), Hirasawa M (translator): The Great Influenza, Kyodo Tsushinsha, 2005
2) Former Bureau of Public Health, Ministry of Interior, eds.: Influenza, 1920
3) Kawamura K: Using *maoto* in the treatment of influenza patients. 39th Annual Meeting of the Japanese Society for Pediatric Infectious Diseases, 2007
4) Kubo T, Nakata H: Effectiveness of *maoto* in pediatric influenza infection. Proceedings of the 56th Annual Meeting of the Japan Society for Oriental Medicine, 204, 2005
5) Kuroki H: Using *maoto* in the treatment of influenza. 6th Japan Convocation on Kampo in Pediatric Applications, 2005
6) Fukutomi O, et al.: Using *maoto* to effectively relieve influenza symptoms. Kampo Igaku 29(5): 28-30, 2005
7) Kimoto H, Kuroki H: Effects of concomitant use of oseltamivir phosphate and *maoto* in treating influenza. Kampo Igaku 29(4): 16-19, 2005
8) Mori K, Miyazaki Z: Therapeutic effects of concomitant use of oseltamivir and Kampo in the treatment of influenza. Journal of Kampo Medicine 53(12), 11-20

Clinical Report 1 (Japan)

Case Report of Acupuncture: Phallodinia

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Introduction

In recent years the integration of western medicine and Kampo has come to be called integrative (complementary) medicine. However, within Kampo the collaboration between Kampo medicine on the one hand and acupuncture and moxibustion on the other hand is also very important. Neither treatment with Kampo medicine nor acupuncture and moxibustion alone can be called complete. Should not true medical care consider the kind of treatment most appropriate for any given disease from the point of view of the patient?

The case presented here was treated first with western and Kampo medicine, which was subsequently combined with acupuncture and moxibustion treatment. During the course of the treatment, the cause for the condition could not be identified from the western medical perspective. In cases considered to represent an aggravation of the prevailing pattern in a Kampo medical sense, completing the treatment with acupuncture and moxibustion can produce good results, as, it did with this patient.

[Case] Age 69 years, height: 164 cm, weight: 59 kg, self-employed.

[Chief complaint] phallodynia

[Present illness]

Two years ago, development of dysuria, 1 year ago treatment was initiated with the prescription of Kampo medicine (*hachimijiogan)* from the department of oriental medicine of a hospital affiliated with a university.

Due to an aggravation of the symptoms since February of this year, the patient was treated pharmacologically in the department of urology of this clinic, but because the symptoms did not improve, he underwent transurethral resection of the prostate (TURP) in July of this year. After that, the dysuria was relieved and micturition with a certain force possible, but from the third month after the surgery he experienced a sense of coldness of the penis. Moreover, from the beginning of October, pain also developed in the region and by the end of the same month the sense of coldness exacerbated.. In the department of urology no particular anomaly could be identified. It was decided to keep the patient under observation.

Since the patient began to receive acupuncture and moxibustion treatment for stiff shoulders in our office for about one month., I decided to treat the sense of coldness and pain of the penis also.

[Present status]

The phallodynia had the characteristics of psychroalgia. There were no diurnal variations and the penis felt as if immersed in ice-cold water. Even in a hot bath the patient did not feel any warmth. He warmed it daily with simple single-use pocket heaters. Unless these heaters were attached to the affected region, pain would worsen. There was no micturition pain. The urine was transparent in color. Frequency of nocturnal micturition: once. The presurgical dysuria and pollakisuria had been alleviated.

Regarding the general condition, there was some stringy shoulder stiffness. The sensation of stiffness appeared to be stronger around the right shoulder. It increased after work or with lack of sleep. It was alleviated through massage (preference for pressing = xi an). Development of discomfort on the back of the head and the neck when the shoulder stiffness continues. Appetite normal. Shallow sleep and difficulty in falling asleep. Chilling of the legs. Low back pain and dull pain of the right side of the body (in particular of the leg) as well as weariness. The patient

tended to sweat profusely over the entire body. Recurrence of tinnitus that had temporarily disappeared after treatment with Kampo medicine. There is also some hardness of hearing. Decrease in visual acuity. Constipation was controlled with drugs, but warming the abdomen usually induced bowel movements. There was also some decrease in virility.

Pulse: deep, wiry, thin
Tongue: tongue substance: dark red with white coating
Pattern identification: kidney yang deficiency

The disease was located in the kidneys. The reason for this conclusion is that the penis is the anterior yin (genital) of the two yin. This location refers to the physiologic function of the kidneys summarized as "kidneys control the two yin orifices"[1][2]. The dysuria and frequency of micturition and similar symptoms induced by prostrate hypertrophy are considered due to the failure of the production of vital energy by the kidneys, i.e., their opening functions. This in turn suggests a decrease in the kidneys physiological function of water regulation.[3] Also, the kidney unites the bones and controls the bones and generates bone mark[4][5]. Thus, because of the lack of kidney essence the bone marrow becomes empty and leads to the development of 'limb and aching lower back and knees' (dull pain and a feeling of weariness of the lower back and limbs). The hearing function of the ears too is related to the kidney essence[6]. For this reason a lack of kidney essence was considered to be responsible for the development of tinnitus and the hardness of hearing.

Next, regarding the qualitative aspects, the sensation of cold and pain of the penis were considered to be due to a cold pattern. The improvements in the bowel movements observed after warming and the fact that the patient experienced pressing massage of the shoulder region as pleasant indicated a lowered warming function for the body. Based on the above findings, I conjectured that the nature of the disease was that of a cold deficiency.

Also, I would like to briefly reflect on the shoulder stiffness which was the reason the patient started acupuncture and moxibustion treatment. The symptoms of the back of the head and neck followed roughly the course of the bladder meridian. This channel has an interior-exterior correlation with the kidney, so that the bladder channel was considered to influence the muscles in this region. Moreover, since liver and kidney have the same origin, the kidney essence deficiency causes a liver blood deficiency, which was considered to be responsible for the insomnia.

Thus, a kidney yang deficiency was the basis for the condition, and in this case, improved after treatment with both Kampo medicine and acupuncture and moxibustion. Yet, the surgery had injured the yang qi. This led to the manifestation of the kidney yang deficiency pattern and resulted in the sensation of cold and pain in the penile region.

[Point selection]

Jinyu (BL23), Meimon (DU4), Jiryo (BL32), Kikai (RN6), Kangen (RN4), Chukyoku (RN3), Sokusanri (ST36), Saninko (SP6), Taikei (K3); all points where stimulated using the tonifying twirling method; Kakuyu (BL19), stimulated using the neutral supplementation and drainage method.

[Explanation]

Jinyu (BL23) and Taikei (K3) are the transport and source points of the kidney meridian. In combination with Meimon (DU4) they serve to supplement and tonify the kidney yang[7]. Adding Kangen (DU4) further strengthens the warming and supplementation of the kidney yang. The effects of this point selection are similar to those of Ukigan (Kampo medicine)[8]. Moreover, through combination with the source and transport points Chukyoku (RN3), Kikai (RN6) the kidney qi is supplemented and boosted and enables to

improve the insecurity of the lower origin and failure of the bladder's retentive power[9]. Finally, Kakuyu's and Saninko's action of supplementing and containing blood was used for the purpose of supplementing liver blood[10].

By tonifying Jiryo (BL32), an essential point used for the treatment of diseases of the genital and anal regions, the regional flow of yang qi is improved[11].

[Course]

I scheduled one to two treatments per week.

First visit: A VAS for both the cold sensation and pain showed a value of 80 mm.

Second visit: No changes in the VAS for the cold sensation and pain. The fatigue changed into a mild discomfort. The tinnitus had been alleviated. Treatment using the same point selection.

Third visit: Slight reduction of the pain after the treatment, expressed as a reduction of the VAS value to 50 mm. However, a persistent effect could not yet be observed. The VAS value for the cold sensation remained at 80 mm.

Fourth visit: The VAS value for the pain of the penis had decreased to 30 mm. No change in the cold sensation. The lower limbs started to warm up slightly.

Sixth visit: Tendency towards a decrease in the VAS value for the cold sensation to 60 mm.

Eighth visit: The patient himself realized a decrease in the cold sensation. The VAS value for this symptom had decreased to 30 mm and that for the pain to 20 mm.

Tenth visit: Started to work again. Appearance of a certain degree of fatigue and cold sensation.

Eleventh visit: Mild tendency towards insomnia. Addition of Naikan (PC6) to quiet the heart spirit.

Thirteenth visit: The cold sensation and pain of the penis had been alleviated. The VAS for both symptoms was 0 mm.

[Discussion]

Benign prostatic hyperplasia (BPH) is a frequent disease in elderly men. Clinically, it can be observed in about 10% of men in their 40s and in about 70% of men in their 70s[12]. Clinical symptoms include 1) decreased micturition force, 2) the person has to wait a while until micturition starts, even if there is the intention to urinate, 3) straining is required at the start and end of the micturition, 4) micturition requires a longer time and cannot be suddenly interrupted, 5) after the end of the micturition minimal amounts continue to trickle, 6) there is a feeling of residual urine, 7) urinary retention, 8) pollakisuria, 9) nocturia, 10) micturition pain, 11) urinary urgency and 12) incontinence[13]. These symptoms correspond to the above described pathologic functions of the kidney.

In this patient the condition developed following the TURP. Uchida et al. reported the following incidence of complications for this surgery: perforation of the prostate capsule in 4.4%, perforation through the bladder wall into the abdominal cavity in 0.3%, requirement TUR coagulation because of hemorrhage in 3.5%, hyponatremia in 0.6%, sepsis in 0.4%, acute postsurgical epididymitis in 0.9%, urinary incontinence in 0.8%, urethral stenosis in 0.5% and postsurgical sclerosis of the bladder neck in 0.9%[14]. Moreover, Tazaki et al. listed hemorrhage induced postsurgical tamponade, urinary incontinence, impotence and similar conditions[15]. Symptoms like the ones observed in this patient were not recorded. However, Kanbe et al. reported, that nerve blocks performed for phallodynia and cold sensation developing after TURP were effective[16]. Phallodynia has also been mentioned in texts about Kampo medicine.

In the section about the treatment of blood impediment and exhaustion diseases of the Jin Kui Yao Lue it says: "loss of virility, tense muscles of the lower abdomen, cold glans, vertigo, loss of hair", so that Keishi Karyukotsu Borei To is used the dissipate cold and secure essence[17].

In section 67 dealing with the symptoms of

diseases of fatigue and exhaustion in the General Treatise on the Etiology and Symptomology (Zhu bing yuan hou lun) it says: "When fatigue and exhaustion cause the phallus to grow cold, this is due to a deficiency of both yin and yang qi. The kidney governs the storage of essence, controls bone marrow and opens into the anterior yin. If yin is deficient and yang weakened, it is not possible to nourish blood and qi sufficiently, so that it becomes impossible to properly warm and nourish the anterior yin and as a result the phallus grows cold. If the condition persists for a prolonged period of time, impotence will develop (18)." In section 69 of the same book it says: "Fatigue and exhaustion will injure the kidney qi, and if there is an attack of wind-cold evil, the evil qi will invade the kidney meridian and attack the yin qi, resulting in a struggle between vital and evil qi, causing pain in the anterior yin. If this is caused solely by the wind-cold evil, pain will be the only symptom, but if there is additional influence from heat evil, swelling will also develop." (19). In this case the condition is not caused by external evil, but rather internal cold (deficiency cold) that generates pathogenic cold, suggesting the development of a condition was just as described in the above mentioned two classics.

Summary

The underlying condition in this case was considered to be a kidney yang deficiency and initially treated with Hachimi Jio Gan and by supplementing kidney yang, but the surgery induced injury of both qi and blood led to a blood deficiency and stasis, resulting in stagnation of the qi flow through the penile region. This in turn decreased the warming action and thus generated the cold sensation and pain. The patient was treated with a combination of Kampo medicine and acupuncture and moxibustion, which resulted in a marked improvement of the kidney yang deficiency induced cold sensation of the penis and pain. This patient was treated successfully with a Kampo and acupuncture combination therapy and as such represents a highly suggestive case report.

[References]

(1) Commentary on the Huang Di Nei Jing (Huang Di Nei Jing Su Wen Shi Wen), last volume, published by ["山東中医学院・河北医学院講校釈" 五常政大論篇], p.966, People's Medical Publishing House 1982

(2) Chinese Medical Splanchnology, second edition, editor: [王琦主編], P.665, People's Medical Publishing House 2004

(3) Commentary on the Huang Di Nei Jing, first volume, published by [山東中医学院・河北医学院講校釈], [上古天真論篇], p.8, People's Medical Publishing House, 1982

(4) Commentary on the Huang Di Nei Jing, first volume, published by [山東中医学院・河北医学院講校釈, 素問宣明五気篇], p.336, People's Medical Publishing House, 1982

(5) Commentary on the Huang Di Nei Jing, first volume, published by [山東中医学院・河北医学院講校釈, 六節臓象論篇] p.143－144 People's Medical Publishing House, 1982

(6) Modern translation of the first volume of the Huang Di Nei Jing Su Wen, Hidemi Ishida et al. translation supervisors, Section on pulses in the Ling Shu, p.327-328, Toyo Gakujutsu Shuppansha, 1999

(7) Clinical Acupoints, translation: Hyodo Akira; P.743; Toyo Gakujutsu Shuppansha, 1995

(8) Clinical Acupoints, translation: Hyodo Akira; P.656; Toyo Gakujutsu Shuppansha, 1995

(9) Clinical Acupoints, translation: Hyodo Akira; P.664; Toyo Gakujutsu Shuppansha, 1995

(10) Clinical Acupoints, translation: Hyodo Akira; P.361; Toyo Gakujutsu Shuppansha, 1995

(11) Clinical Acupoints, translation: Hyodo Akira; P.406; Toyo Gakujutsu Shuppansha, 1995

(12) Urology MOOK, Prostate Hyperplasia – from the basics to the newest therapies, Yoshiki Sugimura et al., p. 8-13, KANEHARA & Co., LTD., 1993

(13) Urology MOOK, Prostate Hyperplasia – from the basics to the newest therapies, Hajime Ishida et al., p. 32-36, KANEHARA & Co., LTD., 1993

(14) Complications and their management in 2266 patients who underwent TURP before, during and after surgery, Toyoaki Uchida et al., Journal of the Japanese Urological Association, pp. 897-905, Vol. 84, No.5, 1993

(15) Urology MOOK, Prostate Hyperplasia – from the basics to the newest therapies, Hiroshi Tazaki et al., p.130-139, 1993

(16) Therapeutic experiences with the treatment of intractable postsurgical penile pain, Hiroshi Kanbe et al., Journal of the Japan Society of Pain Clinicians, p. 224, Vol.6, No.3, 1999

(17) Shang Han Za Bin Lun, comprised of the "Shang Han Lun" and "Jin Kui Yao Lue", third edition, Compilation by the academic chapter of the Japanese Kampo Society, P.282, Toyo Gakujutsu Shuppansha, 2000

(18) Annotated General Treatise on the Etiology and Symptomology, 4th volume on signs and diseases of fatigue and exhaustion (second volume), 67 fatigue and exhaustion, translation by Koichiro Muta, P. 77-78, Midori Shobo, 1989

(19) Annotated General Treatise on the Etiology and Symptomology, 4th volume on signs and diseases of fatigue and exhaustion (second volume), 69 fatigue and exhaustion, translation by Koichiro Muta, P. 77-78, Midori Shobo, 1989

Situation on Acupuncture & Moxibustion in Tokai University

[History]

In Tokai University, the practice of acupuncture moxibustion was started in 1984 by late Dr. Kumio Yamashita at the Department of Oriental Medicine of the School of Medicine affiliated Oiso Hospital. Since 2001, treatments have been provided at the Acupuncture Moxibustion Room on a daily basis.

In June 2003, the Acupuncture Outpatients started in parallel with the opening of lectures on Oriental Medicine. Since April 2005, Associate Professor Makoto Arai and Instructor Katuhiko Arai, who have assumed full time positions, have been performing the practice at the Specialized Outpatients annexed to the Department of Oriental Medicine twice a week, taking turns in half-a-day shifts. Other than Tokai University, medical institutions that have two Outpatients are very limited.

[Fact of Practice]

In Tokai University, treatments are given to the patients who are referred by their attending physicians.

Patients profiles are compared for the period of June 2003 to March 2006 between the two establishments of the Acupuncture Moxibustion Outpatients of Tokai University Affiliated Hospital (hereinafter “Affiliated Hospital”) and the Acupuncture Moxibustion Treatment Room of Tokai University School of Medicine Affiliated Oiso Hospital (hereinafter “Oiso Hospital”). The results are as follows:

Average age of patients was 59 at Affiliated Hospital and 57 at Oiso Hospital. Female patients accounted for more than 40% at each hospital.

In regard to referrals, Affiliated Hospital received referred patients at the highest rate of 58% from the Department of Oriental Medicine, followed by 19% from Neurological Internal Medicine, then 6% from Orthopedics, whereas Oiso Hospital had them in the descending order of 51% from Orthopedics, followed by 13% from Neurological Internal Medicine and 13% from Rehabilitation.

In regard to chief complaints, Affiliated Hospital had t requests to treat pain which accounted for 46%, stiff shoulders 19%, paralysis 6%, and sense of systemic discomfort 6%; whereas Oiso Hospital had requests to treat pain at 70%, stiff shoulders 13% and numbness 7%.

The comparison data of these two institutions were characterized mainly by the fact that painrepresented 46% of all the chief complaints at Affiliated Hospital against 70%, which is significantly high, at Oiso Hospital.

This is because 85% of the treatment requests received by Oiso Hospital were made for the "purpose of pain control" mostly from Orthopedics while various symptoms other than pain are the subject of the requested treatment of acupuncture moxibustion at Affiliated Hospital. For the motives of hospital visits, physician's instructions accounted for 58% at Affiliated Hospital and 32% at Oiso Hospital. And physician's instructions from the Department of Oriental Medicine accounted for 90%. This is because physicians specialized in Kampo medicine in the Department of Oriental Medicine made referrals since they may regard the treatment by acupuncture moxibustion as being effective for a broad range of indications.

From the above it may be considered that acupuncturists and moxibustionists engaged in the practice at medical institutions have opportunities to examine patients as physicians specialized in Kampo medicine, which will lead to the improvement of acupuncture moxibustion techniques.

Clinical Report 2 (Japan)

A Cases in which Goreisan was effective for Hypoalbuminemic Edema

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< Summary >

Introduction

Critical diseases are often followed by hypoalbuminemic edema. Relief of hypoalbuminemic edema is limited to western medical methods, but solutions of various associated problems like efficacy, economical problems, decrease in renal function, variations in electrolytes and the like are often difficult. Here we report our observations indicating that *goreisan* is effective for the treatment of hypoalbuminemic edema.

Patient

A 57-year old man who had been found collapsed in his home after not eating during the winter time because of economical poverty, was transported to a hospital by ambulance . Upon admission, there was cardiopulmonary arrest. There was also complicating hypothermia, so that he was connected to an artificial heart lung apparatus. Later, because of persistent low blood pressure and urine volume, large amounts of blood transfusion and fluid therapy were administered. Because a marked degree of hypoalbuminemia and edema was observed following subnutrition and critical disease, we administered *goreisan* and *juzentaihoto*, after which a swift recovery of the edema was achieved.

Discussion

Defining suitable conditions and indications for the use of *goreisan* has been difficult. An examination of the classics reveal that it is used to treat uneven distribution of water. Hypoalbuminemic edema can also be considered to be a form of even water distribution and therefore an indication for *goreisan*.

< Main text>

Introduction

Critical conditions like sepsis, multi-organ failure, major surgeries, chemotherapy etc. are often followed by hypoalbuminemic edema. Western medicine administers aldosterone antagonists, loop diuretics, or a combination of albumin preparations and loop diuretics to relieve the hypoalbuminemic edema[1]. Yet, some time is required until the aldosterone antagonists take effect and their effectiveness may be insufficient. Albumin preparations are associated with the risk of infection via body fluids and because of their extremely high costs, there are many obstacles regarding their use. Again, administration of diuretics decreases renal function and causes electrolyte disturbances. A major factor responsible for the difficulties relating to the treatment of hypoalbuminemic edema is, that although there is an accumulation of both fluid and saline matter, the volume within the vessels often decreases, so that administration of ordinary diuretics does not result in sufficient diuresis, but may easily lead to decreased renal function and electrolyte disturbances. Thus, we report here a case in which the Kampo medicine *goreisan* proved to be effective for the treatment of hypoalbuminemic edema.

[Chief complaint] cardiopulmonary arrest due to accidental hypothermia, subnutrition, edema

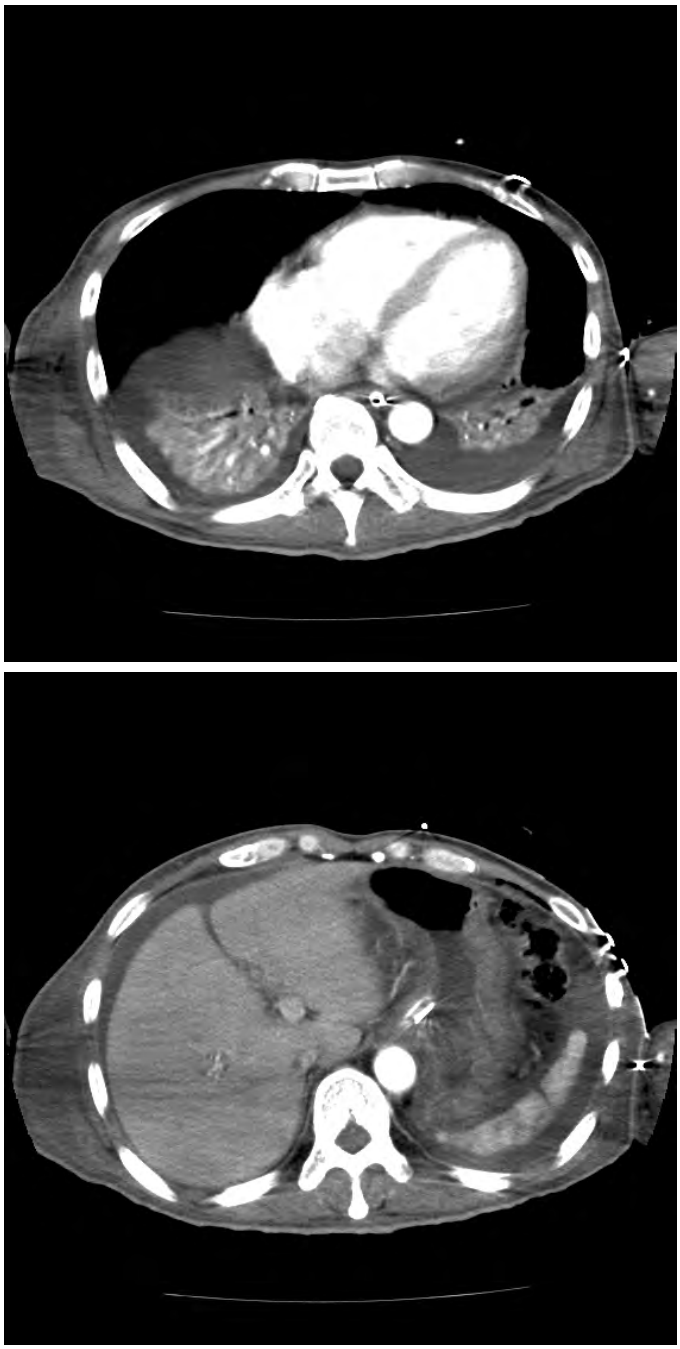
[Anamnesis]

The patient had not eaten for almost a month after he had been forced to leave his employer. On December 21^{s,} 2004 his daughter found him collapsed in his home and had him transported to a hospital by ambulance. Upon admission there was cardiopulmonary arrest. Administration of cardiac massage, artificial ventilation management, and cardiopulmonary resuscitation. Moreover, rectal temperature was 24.5℃, indicating accidental hypothermia associated with cardiopulmonary arrest, so that he was connected to an artificial heart lung apparatus and

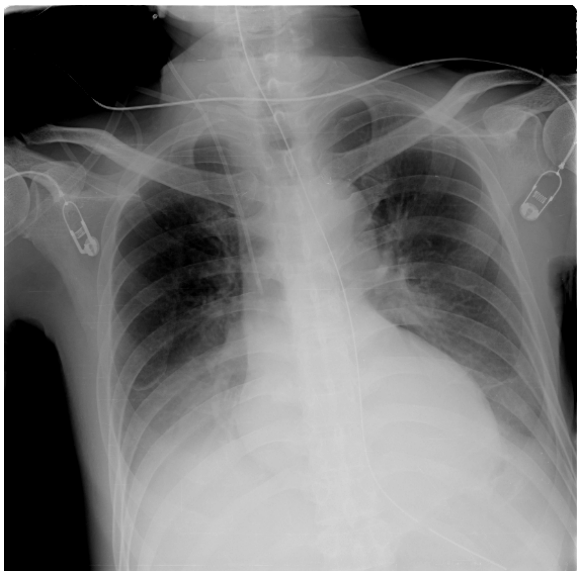
cardiopulmonary resuscitation performed. Later, following resuscitation he developed shock due to marked dehydration and hemorrhage from the connection sites for extracorporeal circulation, so that large amounts of transfusion fluid were administered in the form of 30 units of concentrated erythrocytes and 30 units of frozen fresh blood preparations in order to maintain blood pressure and urine volume, as well as an in-out balance + approximately 5 l/day of fluid therapy. Due to the development of pleural effusion and ascites, as well as interstitial edema associated with the subnutrition, a marked degree of hypoproteinemia developed, upon which we initiated treatment with 7.5 g/day of *goreisan* and 7.5 g/day of *juzentaihoto*.

12/24
TP: 3.7 g/dl, Alb: 2.2 g/dl, BUN: 10.4 mg/dl, Cre: 0.66 mg/dl, Na: 143 mEq/l, Cl: 109 mEq/l, K: 4.2 mEq/l, Ca: 8.4 mg/dl

Contrast CT performed on 12/24 (Picture 1) revealed bilateral pleural effusion and ascites. A plain x-ray film taken on 12/26 showed the same degree of pleural effusion (Picture 2). From 2 hours after starting the administration of *goreisan* and *juzentaihoto* a diuretic effect started to set in, leading to a urine volume of around 4 l/day and a decrease in the edema (see Figure 1). Plain x-ray films taken on December 29th showed clearly the disappearance of the pleural effusion and the edema too had almost disappeared. Simultaneously, urine volume also decreased. Since a balance had been achieved between the amount of tube feeding administered via a nasogastric tube and the urine volume, the administration of *goreisan* was discontinued. Even during the diuresis no electrolyte disturbances or anomalies of renal functions were observed. Electrolyte supplementation was performed, but a blood examination performed on 12/29 showed TP: 4.9 g/dl, Alb: 2.6, BUN: 8.8 mg/dl, Cre: 0.58 mg/dl, Na: 142 mEq/l, Cl: 105 mEq/l, K: 4.4 mEq/l, Ca: 8.1 mg/dl, showing no signs of renal dysfunction or electrolyte anomalies.



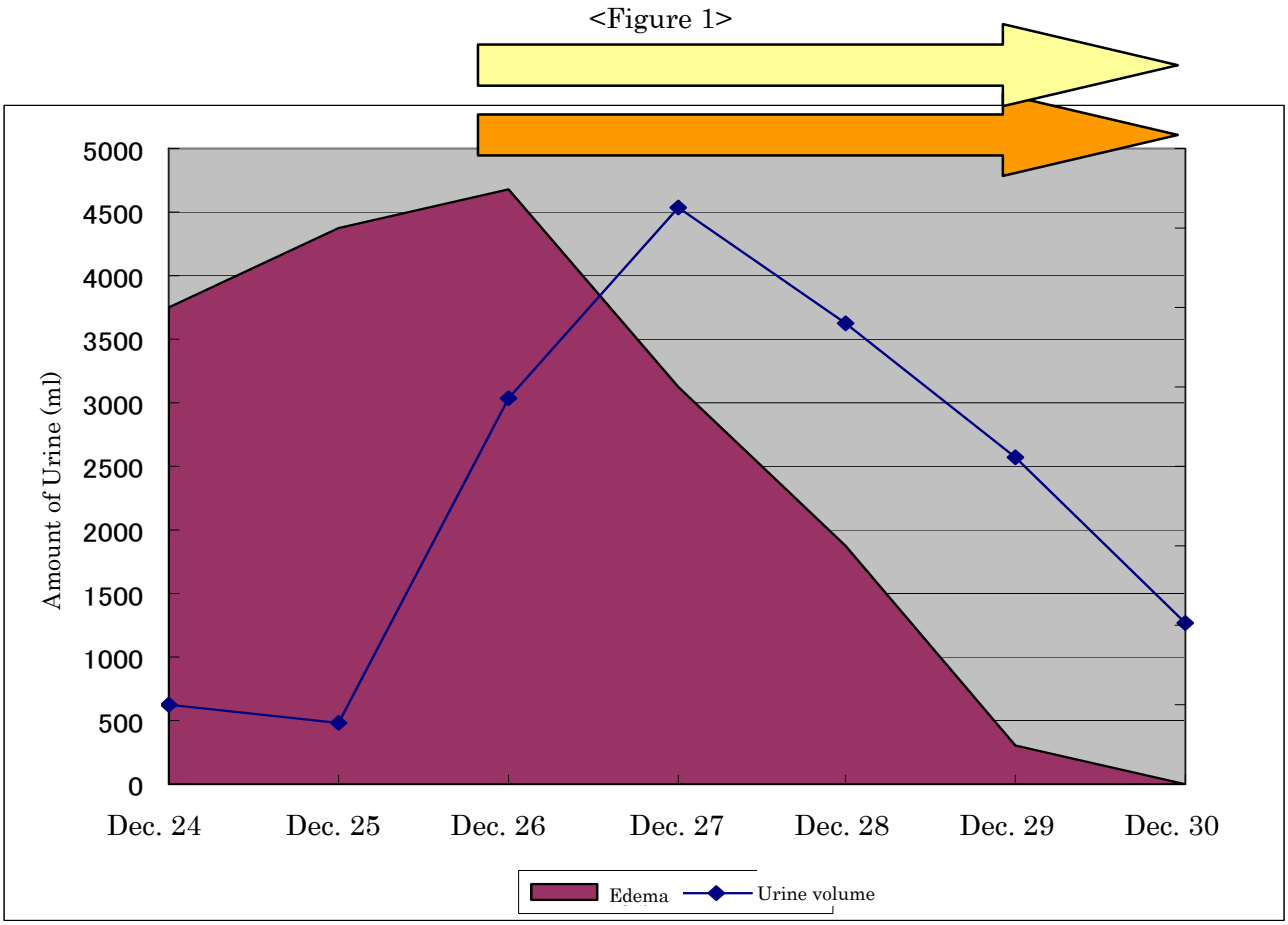
Picture 1
Contrast CT from 12/24
Shows a large amount of bilateral pleural effusion and soft tissue edema.



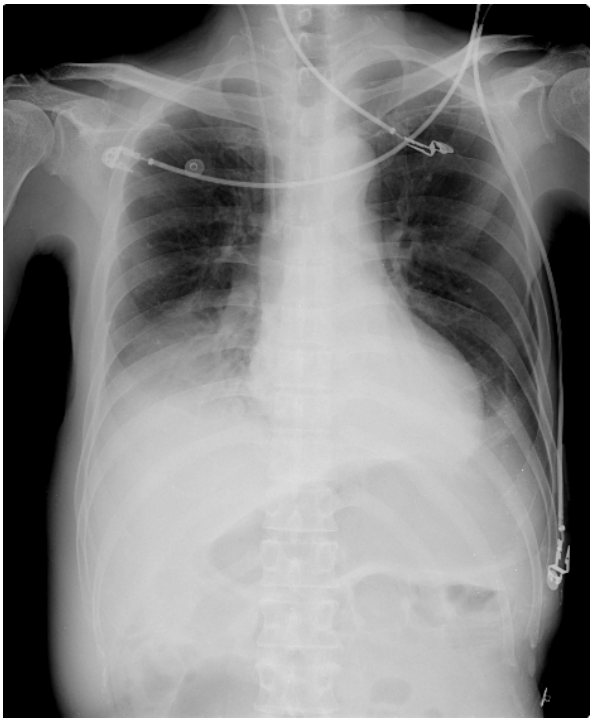
Picture 2
Plain chest x-ray film from 12/24
Shows a large amount of bilateral pleural effusion

Figure 1 below: Due to the rapid onset of diuresis starting 1 hour after the administration of *goreisan*, the fluid therapy was discontinued. On 12/27 the urine volume reached a peak of 4,570 ml/day, after which the urine volume gradually decreased. On 12/30 a balance with water administered with tube feeding was achieved.

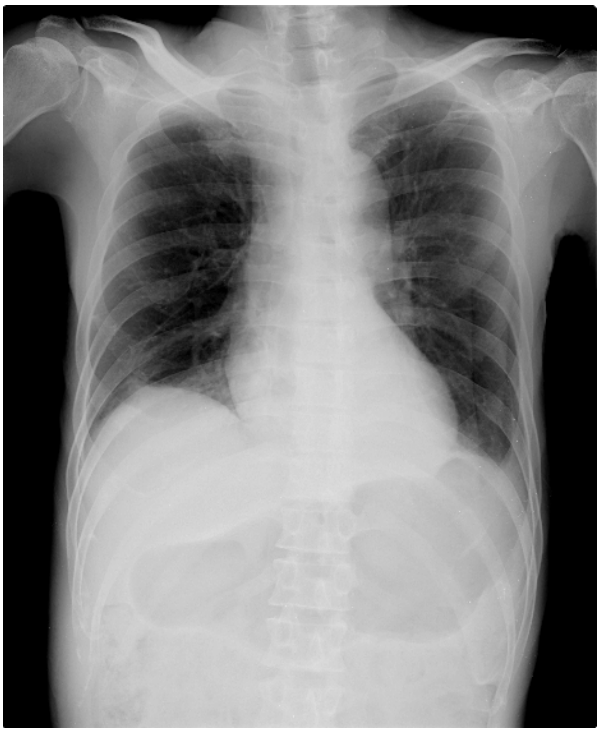
<Figure 1>



: 7.5 g/day of *goreisan*
: 7.5 g/day of *juzentaihoto*



Picture 4
First day of *goreisan* administered (12/26)
Bilateral pleural effusion



Picture 5
Fourth day of *goreisan* administered (12/29)
Marked improvement in the pleural effusion was observed.

Discussion

Previously, various reports have been published that dealt with the kind of symptoms and pathologies for which *goreisan* could be used. Although *goreisan* has wide actual clinical applications, the provided explanations still cannot be considered sufficient. Turning one's attention to classical references pertaining to *goreisan*, leads first to the Shang Han Lun and Jin Kui Yao Lue. Both of these classics were written in the later Han period. An examination of the historical applications reveals that the descriptions found in the Shang Han Lun, Jin Kui Yao Lue and also the [Gedai Hiyou Ho] of the Tang period are the basis. Examination of the passages referring to the indications for *goreisan* among these classics shows that cases where there is a water surplus in one area of the body and a water deficit in another part is indicative of a maldistribution of water[2-10]. In case of hypoalbuminemic edema, there is a surplus of water outside the blood vessels, but the amount in the blood vessels decreases, creating a condition that can be considered to be a form of water maldistribution. In this patient, *goreisan* was used for the purpose of treating the hypoalbuminemic edema induced maldistribution of water and produced a marked effect. This suggests, that hypoalbuminemic edema could be an indication for the use of *goreisan*. Moreover, since the treatment of hypoalbuminemic edema with western medicine has the above described disadvantages, *goreisan* could possibly become the drug of first choice.

[References]

1) Up to date® online 15.1 “Treatment of refractory edema”

2) 脉浮小便不利微熱消渇者宜利小便発汗五苓散主之(Jin Gui Yao Lue , Chapter13 Dispersion-Thist, Inhibited Urination, and Strangury)

3) 渇欲飲水水入則吐者名曰水逆五苓散主之（Jin Gui Yao Lue, Chapter13 Dispersion-Thist, Inhibited Urination, and Strangury）

4) 太陽病発汗後大汗出胃中乾煩躁不得眠欲得飲水者少少與飲之令胃気和則愈。若脉浮小便不利微熱消渇者五苓散主之。(Shang Han Lun, Line71 傷寒論　辨太陽病脉證并治中)

5) 本以下之故心下痞與瀉心湯。痞不解其人渇而口燥煩小便不利者五苓散主之。(Shang Han Lun, Line156 Early Yang stage 辨太陽病脉證并治下)

6) 脉浮小便不利微熱消渇者與五苓散利小便発汗(Shang Han Lun 辨発汗後病脉證并治)

7) 発汗已脉浮煩渇者属五苓散證 (Shang Han Lun, Line72　辨発汗後病脉證并治)

8) 傷寒汗出而渇者宜五苓散。不渇者属茯苓甘草湯。(Shang Han Lun, Line73　辨発汗後病脉證并治)

9) 五苓散主天行熱病但狂言煩躁不安精采言語與人不相主當方。(Wai Tai Bi Yao Vol.3 外台秘要方巻三　天行狂言方)

Clinical Report 3 (Japan)

A Case of Migraine in which Goshuyuto was effective

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[Case] 42 years, female, housewife
[Chief complaint] headache associated with nausea, stiffness of neck and shoulders
[Past history] at the age of 22 whiplash injury caused by traffic accident
[Family history] no appreciable disease
[Present illness]

The patient has been experiencing shoulder stiffness since her elementary school days, but since the whiplash injury she sustained 20 years earlier during a traffic accident, her neck also became stiff and painful. Moreover, about 10 years ago, headaches limited to the left parietal side developed, whereupon she was diagnosed with migraine. The headache had a pulsating character and developed every morning upon getting up, being restricted to the left parietal side and the attacks were preceded by an increasing feeling of heaviness of both shoulders, followed by pain behind the eyeballs, slight yawning, which was then followed by a severe headache feeling as if her head might split. During these headache attacks she took a therapeutic agent for migraine (Zomic®) and went to bed, but a slight delay in the timing of the drug intake resulted in the occurrence of epigastric discomfort and nausea, which in severe cases subsequently led to actual vomiting.

Moreover, the patient since her youth was excessively sensitive to cold and recently started to feel cold even immediately after a hot bath. Her sensitivity to cold had grown so much worse that her abdomen cooled shortly after such a bath and led to diarrhea.

She was introduced to our clinic by an acquaintance of hers who had been cured of headache using Kampo medicine and visited our Kampo ambulance first in January 2007.

[Present status] Height: 159 cm, weight: 65 kg, blood pressure: 120/78 mmHg, pulse: 68 bpm, regular. The tongue had no coating and showed slight dental impressions (caused by edema of the tongue, so that impressions of the teeth remain on its margin; in Kampo medicine considered to be a sign of water toxin) were observed. The pulse was deep and weak. The abdomen showed a mild degree of increased resistance and tenderness of the epigastric region (a certain degree of resistance upon palpation of the epigastric region) and right-sided fullness, tenderness or discomfort of the hypochondrium (a condition of strong tension along the hypochondrium), and furthermore tenderness of the left lower abdomen (an abdominal finding indicative of blood stasis). There was markedly increased muscle tonus extending from both shoulders to the neck. There was edema of both legs which felt cold on touch. Neurologic anomalies were not observed.

[Course] Targeting headache attacks associated with vomiting *goshuyuto* (Tsumura & Co., Ltd., Tokyo, Japan, 7.5 g, before every meal) was administered.

Three days after the patients started taking *goshuyuto* the headache decreased to half of its intensity and nausea had been alleviated. The analgesic (migraine therapeutic agent) the patient had been using daily became almost unnecessary and during 1.5 months following treatment begin she had used only 1 tablet. Since this prescription has caused such a dramatic improvement, the dose was later reduced, prescribing 5.0 g/day for

another month and the medication then discontinued.

[Discussion]

The formula "*goshuyuto*" is frequently used for the treatment of migraine. In other words, if migraine has been diagnosed by western medical methods, *goshuyuto* will often be effective, making this formula the drug of first choice. From a Kampo medical point of view it is effective not only for migraine, but also considered effective for headaches with the following characteristics.

1) Headache with a pulsating character or marked by tension, which in each case is both severe and frequently occurs in attacks.
2) Associated with the headache patients complain of epigastric discomfort and nausea, which are often accompanied by vomiting.
3) As a prodromal symptom for the headache patients complain of stiffness from the shoulders to the neck.
4) Generally, during attacks the feet are said to be extremely cold, but this must not necessarily be the case.
5) The abdominal pattern often allows one to observe a feeling of increased epigastric tension (uprising epigastric fullness), but this is not essential.
6) During attacks the pulse seems to be generally deep and slow. (I have never made a pulse diagnosis of a patient having an attack in my presence. During the intervals between attacks the pulse can also be floating.)

Again, in cases in which *goshuyuto* is effective, the time until the appearance of the effects too is comparatively short, so that symptoms generally often improve within a period of 2 weeks from the start of the treatment.

Goshuyuto was originally mentioned in the section on the "terminal stage of the three yin diseases" in the "Shang Han Lun": '*goshuyuto* governs conditions in patients with headache dry vomiting and vomiting foamy sputum'[(1)]. The formula contains the four drugs: *Evodiae* Fructus, *Ginseng* Radix, *Zizyphi* Fructus and *Zingeris* Rhizoma, where " *Evodiae* Fructus " is the principal agent, that had been described by Todo Yoshimasu in his book "Yaku-cho" as 'this is the chief treatment for dry vomiting and fullness of the chest'[(2)]. It can be understood from these descriptions, that this formula is used not only for headache. Dry vomiting also seems to be a main indication. In actual clinical practice I emphasize among the above listed 6 characteristics in particular "paroxysmal headaches" and "nausea" when prescribing *goshuyuto* .

In the past, several reports on clinical research about *goshuyuto* have been published. Maeda et al. conducted a case series study during which they administered *goshuyuto* to 147 patients with chronic headache and found 'better than general improvement' in 55% ,and regarding usefulness, a 'better than useful' rating in 54% of the cases. A breakdown of the type of headache showed a tendency towards improvement in cases of vascular headaches and reported that the manifestations of therapeutic effects appeared in 52% of the patients within 2 weeks[(3)]. However, in this study the correlation between headache attacks and nausea was not investigated.

As alternative formulas, *goreisan* should be mentioned first. In actual clinical practice differentiation between the indications for these two formulas is not easy. In cases of association with dry mouth, reduced urine volume or edema, or else a tendency of the headache to occur

preferentially on days preceding rainfall and other characteristic symptoms clearly indicating the possibility of water toxin (uneven distribution of water throughout the body), the administration of *goreisan* should positively be considered.

I also have seen cases, in which headache and nausea were relieved after administration of *unkeito* for menstrual pain or *tokishakuyakusan plus goshuyuto* for cold abdominal colic (abdominal pain induced or aggravated by cold). Moreover, Keisetsu Otsuka, who contributed to the establishment of modern Kampo medicine, has also reported treating patients with migraine for long time using *ennenhangeto*[4]. Since all these formulas contain *Evodiae* Fructus, it would only be natural to expect a certain effect; I believe that comprehension of formulas like *goshuyuto* with few constituent drugs will promote the ability of skillful clinical application of various Kampo formulas.

References

1) "Songban Shanghan-Lun" published by Zhao Kaimei of the Ming dynasty, p.275, Ryogen Co., Ltd., Tokyo 1988
2) Yaku-Cho. By Todo Yoshimasu. Collection of medical books on modern Kampo medicine 10, p.219, Meicho Publishing, Tokyo 1985
3) Koji Maeda, Atsushi Miyagi, Takehito Sugawara, others: Effects of *goshuyuto* for the treatment of chronic headache, Kampo Medicine 22; 53-57. 1998
4) Collection of Works by Keisetsu Otsuka, Vol. 4, p.258, Shunyodo Publishing Co., Ltd., Tokyo, 1980

Clinical Report (Europe)

Case Report: Fall Lumbago u. Diabetes

Ulrich Eberhard

70-year old man
Acute lumbago-ischialgia since 2 weeks.
Diabetes mellitus type II since 15 years
Polyneuropathy
Senile hypertension

Findings:

Right-sided lumbago with myogelosis and inability to move, pain radiating into the right leg along the posterior aspect of the thigh down to the popliteal fossa. Numbness of both hands and feet, tingling paraesthesias of the extremities (in particular during rest).

Other anamnestic information:

- For years weakness of the legs, often dull feeling of numbness of the feet
- Cold feet, that even in summer do not become warm
- Nycturia 3x, polyuria during the daytime
- Buildup of residual urine due to BPH (benign prostatic hypertrophy)
- Arterial hypertension, since several years pharmacologically adjusted (Valsartan + diuretic)
- Generalized physical weakness, fatigues easily

First examination / Shô identification:

- Sturdy statue, lean appearance
- Blood pressure 160/60 mmHg
- Relieving posture, mobility of the lumbar vertebral column painfully restricted (bending and stretching), nerve stretching pain on the right side (Lasègue sign positive at 50°), patellar tendon reflex stronger on the right side, pretibial edema of the lower legs, cold feet, warm hands.
- No coating, body of the tongue bright red
- Pulse deep, without strength

Abdominal examination:

"Kidney hollow"
Bar-like tension between navel and symphysis
periumbilical pulsation below the navel
tense Mm. rectus abdominis of the lower abdomen

Therapeutic course

Japanese acupuncture-moxibustion therapy: meridian school Keiraku Chiryou, every 2 day. Kampo: kidney qi mixture *gosha jinki gan (with Rad. Aconiti praep. 0.5),* initial prescription for 7 days. Rexamination after 7 days: good tolerance, following the third day treatment induced improvement of the acute symptoms.

Subsequent prescription of the same formulation for 14 days *(with Rad. Aconiti praep. 1.0)*

This resulted in stabilization, after treatment for approximately 14 days no more back pain; resorption of crural edema; subjective reduction of the cold sensation, but the numbness and the tingling paraesthesias are still present.

Again repeated prescription of the same formulation for 28 days (with *Rad. Aconiti praep. 1.0).*

The patient is pain free after further 3 weeks of treatment with Kampo and acupuncture, there is an improvement of the circulation, a blood pressure of 140/70 mmHg is measured, the feet are warm and the tingling and restlessness of the legs have been markedly alleviated, while the numbness in the hands still remains. Apparently less marked variations in blood sugar levels (easier diabetes adjustment!).

Termination of the acupuncture-moxibustion therapy.

Continuation of the Kampo treatment for another 4 months.

Introduction of Japanese Acupuncture

Considering the Therapist's Hand (5)

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IV. How are the hands trained?

Factors influencing the hands of therapists can be grossly divided into two groups. In other words, the kind of hands therapists develop is based on "differences in therapeutic concepts" and "differences in therapeutic modalities".

1. Differences in the palpating hands based on differences in therapeutic concepts

Based on differences in therapeutic concepts the sites (tissues) from which the gathering of information is attempted differs, and therefore the requirements of the hands performing the palpation differs as well. For example, depending on whether the therapist bases his/her practice on classical or modern medical theory, the purpose of the palpation will be different.

In case of classical theory the theoretical foundation will be vitalism and humoral pathology, requiring comprehension of concepts like stagnation and flow of Qi and Blood. For this reason the hands have to be trained to be able to perform pulse and abdominal diagnosis, palpate the meridians, check the conditions of the acupoints and the like. The skin, subcutaneous tissues, muscles etc. will be palpated from the point of view of classical theory.

Yet, on the other hand, if modern medicine serves as theoretical basis, solid pathology becomes the foundation and it will be necessary to comprehend the condition of tissues (sometimes organs) and perform palpatory examinations on the basis of a knowledge of physiology and anatomy. Palpation will be performed using concepts like dermatomes, trigger points or Head's zones etc. This allows us to gain insights into the position of bones or the course of muscles in addition to which an understanding of neurological examinations is also required.

Specifically, for example, when considering palpation of the abdomen, (abdominal palpation) palpation of organs (organ examination) based on modern medical theory may indicate hypertrophy or sclerosis of the liver, or swelling of the kidneys. However, when adhering to the classical theory, it is not the organs that are palpated, but oriental medical comprehension aims rather at understanding the condition of the abdominal skin, connective tissue or muscles. This can easily be understood when considering the designation of liver, heart, spleen, lung and kidneys with regard to the abdominal diagnosis according to the Gosei-ha. Or in cases when disease names are associated with the names of organs and viscera, that do not really indicate those organs itself. For example, kidney yin deficiency may not be diagnosed as the western "anatomical" kidney. On the contrary, for the palpation of liver cirrhosis, the liver will be palpated through the skin, connective tissue and muscles. The purpose of the palpation is to feel the liver parenchyme.

2. Differences in palpating hands based on differences in therapeutic modalities

In cases of differences in therapeutic modalities, there are specific aspects palpation is used to ascertain, so that the required palpatory skills differ. In this case, the target tissues vary depending on the therapy applied during treatment. Table 5 shows a number of therapies, but here I would like to describe the kind of palpation required for those therapies (Table 5).

Table 5 How is the hand trained?

Therapy	Goal of palpation
Acupoint therapy	... determine location and reactivity of acupoints
Ashi point therapy	... identify tender or indurated regions
Treatment of muscles	... comprehension of muscles, tendons and ligament (trigger point therapy, pulse therapy etc.)
Treatment based on pulse diagnosis	... identification of the condition of the pulse (strength and condition of the pulse)
Use of tools	... identify stimulation sites

(1) Acupoint therapy

For therapies with the aim of stimulating acupoints, it would suffice to be able to acquire those acupoints according to the descriptions given in the textbooks. In other words, this requires learning the position of the 361 acupoints and practice to be able to locate those positions precisely. Accordingly, it should be sufficient to understand and be able to apply the bone-standard measurement and body inch method.

However, an understanding of the location of the acupoints is a minimal requirement, the location of the acupoints is not simply a question as to how many inches a certain point is separated from a particular bone. Clinical practice therapy will require searching for acupoints mainly in the vicinity of the locations given in the text books. Accordingly, acupoint therapy too, even if performed strictly, requires looking for detailed local and distal reactions. For this reason it is necessary to train the hand in order to make them capable of detecting subtle vital reactions on the body surface.

(2) Ashi point therapy

Ashi point therapy treats the sites indicated by the patient, so that it has been considered a therapy without theoretical foundation. Since needles are inserted into painful areas, a certain degree of therapeutic effects can be observed and the patient is satisfied. Therefore, the therapeutic goal can be said to have been achieved to a certain degree.

However, if ashi point therapy real effects are to be obtained, the therapeutic sites within the areas the patient is complaining about must be firmly established. In other words, determination of the final needling sites requires, not surprisingly, examination of the relevant reactions, so that it is necessary to perform a detailed palpation in order to comprehend those reactions.

(3) Treatment of muscles

Although there are probably no therapists who consider the lesion to be located exclusively in muscles, there may be a substantial number of therapists, who eventually are able to establish a treatment targeting the muscles. This may be due to a trend towards deeper needle insertion or using stimuli strong enough to have the patients realize that the needles are inserted to a certain depth. Palpation related to this kind of needle insertion should provide insights into the condition of muscles and ligaments. Here information pertaining to the skin or connective tissue is rather unimportant. Accordingly, modern anatomy and physiology can be applied without any modifications. However, during actual needling, the question where a particular muscle of a given size should be needled emerges. Therefore, the condition of the muscles must be observed in detail during the palpation, and the palpation must help identify appropriate points for needling.

(4) Treatment based on pulse diagnosis

Pulse diagnosis: Since the pulse condition should be understood for the treatment, detecting minute variations in the pulse is required. Yet, if only the pulse was observed among the multitude of reactions the body shows, and none of those other reactions were considered significant, it would be necessary to first establish a system of correlations between those other reactions and the pulse through comparative studies. Moreover, if an acupoint has been chosen in response to the pulse diagnosis (for example one of the commonly used five element points) and its position has been determined using the bone-standard measuring, in actual practice an even more exact determination of its location would depend on the palpatory skills of the practitioner.

(5) Use of tools to determine treatment sites

In case a dermometer or equipment for Ryodoraku therapy is used, a detailed palpatory examination is not necessary, since the results of the measurements determine point locations. Then the locations of the acupoints can be deducted using the bone-standard measuring. Yet, because this is also a special form of acupoint therapy, practitioners have to face in the end the same problems already described above in the section on "Acupoint therapy".

Medical History in Japan

Dosan Manase and his Medicine (1)

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According to one man who contributed greatly to the revival of Kampo medicine in the current age, Keisetu Otsuka (1900-1982), "The 'Japanization' of Chinese medicine began with Dosan Manase (1507-1594) and was completed by Yoshimasu Todo (1702-1773)." [1] This is an accurate summary of what happened in Japan between the last half of the 16th Century, when Manase began his work with Chinese traditional medicine, which had been imported virtually unchanged into Japan, and the mid-18th Century, when Chinese medicine was modified into a significantly different and uniquely Japanese treatment modality by Yoshimasu Todo. In the next two issues I will introduce the work of Manase, who built the foundation for Kampo medicine in Japan.

Dosan Manase's life story, and the context of his work in Japanese medicine

Chinese medicine first entered Japan in the 5th century, and after many generations of imitation, began to evolve into an independent medical tradition in the 15th Century. This was due to the genius of Dosan Manase. During the first half of the century, the Ashikaga Shogunate formally opened trade with Ming China. Communication flowed freely and trading ships imported large quantities of goods into Japan. Some of the most important imports were medical texts and medicinal ingredients. This was the situation when Dosan Manase entered the scene.

Dosan Manase (1507-1594) was born in Kyoto. After studying in a Buddhist temple, he headed for the seat of learning in east Japan, the Ashikaga Gakko (Ashikaga school) for further studies (the Ashikaga school was introduced to the world in 1550 by Francisco de Xavier as the "largest and most famous general university in Japan").

Koga, located close to this school, was the seat of the Ashikaga Shogunate regional government in East Japan. In its vicinity lived excellent physicians together with many intellectuals. Manase studied first under physicians in charge of important government officials, as well as priests who had returned from studying medicine in China and later the most contemporaneous advanced medicine of the Ming period. Because he was exceedingly sagacious he understood almost all of the material. As a result he acquired a level of medical learning and skills that matched the physicians of the Ming dynasty.

Following his return to Kyoto in 1545, he applied this knowledge, referring to a large number of books, to create his own unique medical system. The fruit of his labor culminated in his main work, the "Keiteki Shu". The purpose of this compilation was to unify the process from diagnosis to therapy based on traditional medical theories. This structure resembles very closely the current form of TCM. A school building, the "Keiteki In", was erected in which the medical system he had founded was taught to students gathering there from all over the country. This system became the Japanese medical standard of the day and spread throughout the country.

Approximately sixty-four references were quoted by Manase in Keiteki-shu which were clearly influenced by the ideas of Zhu Danxin, one of the four great physicians in the Yuan period in China. A great many of Manase's references refer to Zhu Danxin, and this suggests that Manase belonged to the Danxin school.

Manase's Theoretical Approach

1. The Physiological and Pathological Theory

At the beginning of each chapter of Keiteki-shu, the pathological appearance of each disease is described. The theories of yin and yang and the five phases are put to full use and the theory of how diseases develop through ataxia of the viscera and bowels, and an imbalance of Qi, blood, and fluids are fully described. These theories are based on the classics Hangdi-Neijing Suwen and Lingshu[3]. In many cases he also tried to explain symptoms based on the ideas expressed in this classical text, although he refrains from direct quotations. However, none of Manase's works are limited to physiological and pathological theory.

2. Theory of Disease Causation

Since Sanyinfang(1174) is one of the texts quoted by Manase, we can assume that he had a good understanding of its general ideas, including postulated internal factors, external factors, and "way of life" in disease causation. Moreover, in a compilation of Manase's notes, Kirigami, a collection of his lectures, there is a chapter describing the three elements, Qi, blood, and mucus. The importance of these three elements had already been pointed out by his master, Sanki Tashiro, and it is thought that this later exerted a major influence upon Nangai Yoshimasu in his work The Theory of Qi, Blood, and Fluids.

It is fully explained in the chapter on Qi, the chapter on blood, and the chapter on phlegm in Keiteki-shu how Qi, blood, and fluids can exert a harmful influence and cause disease when they become abnormal.

3. Diagnosis

Of the four traditional methods of diagnostic examination (looking, listening and smelling, asking, and touching), Manase attaches most importance of taking the pulse. This is apparent from how Manase explains the relationship between pulse patterns and the condition of diseases, and devotes a section of a chapter to pulse patterns for every group of diseases, and gives directions for treatment.

Manase divides the pu1se condition into six pulse positions. His diagnoses give a detailed account of each of them. In Kirigami he says, "In order to cure a deficient kidney, I take the pu1se on both cubits (a pulse position) and distinguish whether water or fire should be supplied."

The causes of a coating on the tongue and its treatment are briefly mentioned in the chapter on Shanghan in the Keitehi- shu under "Patterns and Treatments of the Coating of the Tongue," however this problem is rarely mentioned in the chapters on general disease groups. It seems that Manase paid little attention to an examination of the tongue except in cases of Shang Han (Cold Injury). In contrast to later practice, in Chinese medical texts of that time, only a few descriptions of tongue examination and its significance are mentioned, although examinations of the tongue were undoubtedly carried out in some form or another. Shanghanshejian by Zhang Deng, written in 1688, first mentions tongue diagnosis in detai1.

Abdominal diagnosis, commonly regarded as one of the characteristics of Kampo Medicine, is not mentioned at all in the writings of Manase

4. Pharmacological Theory

Manase wrote a book on pharmacology entitled, *Nodoku (Efficacy and Side Effects)*. It was heavily influenced by descriptions in the classical Chinese text entitled *Yixuezhengchuan* such as the

following : “Each medication brings about positive effects and unwanted side effects. If the medicine is effective against a disease, the patient will be cured, if not, it becomes worse.” The original Chinese book is simply a kind of memo in which the nature and taste of each medicine are itemized and described, and only those diseases against which the medicine is effective are described. In contrast, in Keiteki-shu [8], Manase puts his great wealth of knowledge of medicines to full use. He seems to have developed a huge pharmacological system, though this is not included in Keiteki-shu. However, as a compendium for everyday treatment, Nitiyo Yakusei Nodoku is quite convenient, and the physicians of those days apparently used it and added various addendum.

Its wide use is also suggested by the fact that in 1603 Manase's adopted son, Gensaku [9], reissued an en1arged version of the text, referring to the most recently imported book on pharmacology, Bencaogangmu(1578).

In Nodoku, the minimum information necessary is described in idiomatic phrases, which must have been widely known if we are to assume that each concept was readily understood. Manase did not mention the medicines by their original names, but adopted a method designed to simplify the description by creating a single character for each medicine, which he called “a single-character name.” He might have intended to protect his own school by the adoption of such a method since rival schools would not know exactly what medication was being prescribed. This is one of the characteristics of the Dosan Manase school.

5. Treatment Theory

It was mentioned above that Keiteki-shu is a text designed to aid in observing symptom patterns and in making treatment decisions. In other words, it is an aid to understanding what is happening inside the patient. Treatment is based upon these observations. The method is almost the same as the distinguishing of symptom patterns and treatments adopted in modern traditional Chinese medicine.

Manase changed his method for distinguishing symptom patterns depending on the type of disease, and adopted specific measures according to the circumstances. For example, in the chapter on edemas, he describes how it is caused by a malfunctioning of the spleen and kidney, and he also mentions the influence of the lung. Treatment is based on these observations. In other words, distinguishing patterns of the viscera and bowels are most important. In addition, he made use of the “analysis of the eight principles”[11] (including the concepts of yin and yang), and he integrated these principles into the ideal case presented in the Shokan-ron[12], where the progression of shokan[13] through six stages is described.

The concepts of Qi and blood are found throughout his writing and are also made use of in the Keiteki-shu. In “Fifty-seven articles” which appear at the beginning of Kirigami[15], Manase mentions the importance of distinguishing patterns of Qi and blood, stating, “It is most important first to discern whether Qi and blood are in excess or deficient in diagnosing various symptoms.”

At the very beginning of each disease group mentioned in Keiteki-shu, the causes of the disease are explained, and the various influences leading to the disease are described. Moreover, as mentioned above, the idea that Qi, blood, and fluids can exert a bad influence once they lose their normal condition was well accepted. With Manase's work, the method of distinguishing symptom patterns and relating them to the causes of diseases was perfected.

From the above, and considering the time that

Dosan lived, it seems that he was in almost perfect command of the concepts and theories which we use now in kampo. However, it was impossible for him to know Xue Ji[1](1488-1558), Zhao Xianke[2] and Zhang Jingyue's[3] ideas (Zhang Jingyue disagreed with the theory of superfluous yang and insufficient yin〔which is used by some people today). On the other hand, he mentioned a disease which indicates insufficiency of genuine yang, which is considered to be one of the fundamental ideas of present day traditional Chinese medicine. These ideas appeared after Xue Ji and the same thing could be said for the epidemic febrile disease[4] theory which appeared much later, indicating the foresight of Manase and his master Tashiro.

However, over and above his theoretical contribution, Manase's work allowed theories created in China to become well known and suitable for use in Japan. His contribution due to his own initiative is remarkable. In addition, he was well able to grasp the differences between Japanese and Chinese medical ideas. He pointed out the impossibility of simply adopting Chinese methods of treatment in Japan, stating, “It is desirable to give different kinds of treatment depending upon the country.” He also made an attempt to establish and write a chapter on the subject of gerontology in the Keiteki-shu, a topic which had not been considered in China, where he described the pathology of old people and indicated some methods of treatment.

Book Review

"Introduction to Kampo Japanese Traditional Medicine" written by The Japan Society for Oriental Medicine

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This is an English-written textbook for beginners of Kampo (Japanese herbal) Medicine. Thirty-five authors of the Japan Society for Oriental Medicine (JSOM) wrote this book. It consists of 6 chapters, 6 appendices, and 8 columns. Chapter I is a general introduction of Kampo. Current status and history of Kampo, difference between Kampo and traditional Chinese medicine, how to learn Kampo, and how to improve Kampo skills. This chapter is of great importance because many Japanese doctors fail to continue the learning of Kampo due to the obstacles at the beginning. The obstacles include the Kampo-specific terms such as "qi", etc.

Chapter II includes the definition of "Sho", pathophysiology in Kampo diagnosis and treatment, as well as physical examination in Kampo medicine. The term "Sho" is one of the most difficult terms for beginners, but "Sho" can be naturally determined when we examine patients in the way of Kampo. It his way, this chapter is also very important.

Chapter III discusses Kampo medical herbs and various formulations. Main actions and adverse reactions are described for each herb and formulation. One of the characteristics of Kampo is the harmonized combination of multiple herbs. Understanding of the actions of each group of formulations is a key element in clinical practice.

Chapter IV consists of the description of how to use Kampo drugs in each category of disease such as digestive, cardio-vascular, respiratory, endocrine and metabolism, renal and urological, neurological, collagen and autoimmune, hematological, gynecological, surgical and orthopedic surgical, dermatological, oto-rhino-laryngological, ophthalmological, psychiatric, pediatric, and geriatric disorders. Usefulness of Kampo in coldness (of extremities), asthenic constitution, and pre-disease state ("Mibyo") is also explained in this chapter.

Chapter V discusses acupuncture. Principles, various kinds of needles and methods (with many photos), overview of moxibustion, indications, contra-indications, and adverse effects of acupuncture are described. In the latter part of this chapter we can see how acupuncture is applied in clinical practice for various diseases. This chapter includes the WHO consensus statement in 1997 showing the disease names for which acupuncture may be effective.

Chapter VI handles complementary and alternative medicines in Japan, and various traditional medicines in the world.

In summary, this textbook covers the basic aspects of Kampo and further readings are listed at the end of each chapter. This book is suitable for beginners as well as co-medical staffs and students. It is also a guide for foreign researchers to know what Kampo is.