

## **Integrating Kampo and Evidence-Based Medicine (Introduction)**

### *Four Episodes About the Integration of Kampo and Modern Medicine*

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From this issue, the Journal provides this series in narrative form to offer a better understanding of the captioned topic.

### **Introduction**

Kampo medicine was introduced to Japan approximately 1,500 years ago. In approximately a thousand years of history with trials and errors, it gradually took on uniquely Japanese characteristics. Then, Todo Yoshimasu established a style of Kampo medicine unique to Japan in the early-18th century.

Kampo medicine was temporarily deprived of its status as orthodox medicine during the Meiji Restoration, but owing to the efforts of many of our forefathers, it was established anew on the foundation of modern medicine in the 1940s. This movement continued even after the end of World War II. In 1972, it became possible to apply health insurance for the use of crude drugs. From 1976, we can prescribe Kampo extract preparations for medical applications in the national health insurance system.

In Japan, Kampo medicine is administered under a unified system of Western medicine. Japanese health care system is completely different from the dualistic medical system just as it is adopted in China and South Korea. Physicians who prescribe Kampo are educated in Western medical school and trained in Western medicine for a period of years after graduation, and know the natural course of almost all diseases. They know well how medical conditions change when standard treatment is administered. They also know well in what types of situations standard Western medical treatment and Kampo medicine should be used together or when they should be used separately.

In this series, I will introduce how Kampo medicine is being used in Japan. The information I provide will be practical and academic, but I will present it in narrative form to help deeper understanding of Kampo medicine used by practicing clinicians. I think it is difficult to provide an accurate understanding of the Kampo situation in Japan today, otherwise. Simultaneously, I will also introduce, as much as possible, evidences that have been confirmed to date.

### **Episode 1:**

Let us begin with an episode that occurred to my patient.

On a certain day in October 2011, a 70-year-old man, my patient, climbed a famous mountain with 1,500 meters in height. On his way down, he became unable to walk because of a muscle spasm in both of his thighs. Even after ten minutes or more, the spasm did not abate, and he remained sitting on the side of the path not knowing what to do. Then, a stranger approached him and said, "Are you okay?" He explained what happened, and the stranger told him, "I have a good medicine for you. Here, take one," and disappeared.

He took the medicine, and within minutes, the spasms in his thighs subsided, and the pain was also gone. He was so surprised for the effectiveness of the medicine. He said to me that he thought the stranger was a God. However, the stranger was simply an ordinary man who gave a shakuyakukanzoto extract to my patient. (The stranger was a pharmacist, as I later learned.)

This episode shows that shakuyakukanzoto is commonly used among many people as medicine for muscle spasms. It is widely known as a "silver bullet" for leg cramps, and this Kampo formula is popular not only as a medical prescription but also as an over the counter (OTC) drug. It is commonly used particularly by people who engage in sports, such as a long-distance cycling trip, hiking, and a

football match.

Katayama et al. sheds light on the roles of Kampo medicine within the health care system in Japan from various perspectives, by analyzing approximately 67 million cases extracted from the data of health insurance treatment statements governed by the Japanese Ministry of Health, Labour and Welfare<sup>1)</sup>. They showed that shakuyakukanzoto is the most widely used prescription in Japan. As a Japanese, it makes me proud that such medicine is readily nearby and available to everyone.

### **Episode 2:**

A 75-year-old man with trigeminal neuralgia came to my clinic on September 25, 2006. In this one month, he felt such strong pain in the right side of his face that it was painful for him even to take a bite of something or to touch his cheek. He visited a general hospital and was diagnosed as trigeminal neuralgia. He was administered Tegretol<sup>®</sup> (carbamazepine), and his symptoms abated once after taking the drug, but the pain recurred after ten days. He said the intensity of his pain varies by the day and worsens before the weather deteriorates.

I administered goreisan (Polyporus Sclerotium 6g, Alisma Rhizome 10g, Atractylodes Rhizome 6g, Poria Cocos 6g, and Cinnamon Berk 4g) with a previous dose of carbamazepine. From the third day of goreisan, his pain subsided largely, and he rarely felt pain at night. By March 2007, his pain could be relieved only with a half of tablet (50mg) of carbamazepine. Thereafter, he got better with alternating periods of getting better and worse. On June 16, 2010, I added another 4g of Poria Cocos in consideration of the increased dampness of the rainy season. After continued administration of this prescription, his pain completely disappeared by the end of February 2011, even without carbamazepine. I continued goreisan for two years thereafter on an intermittent basis because the pain tended to come

back without taking goreisan. After another two years, all medication could be stopped.

This episode describes how a trigeminal neuralgia patient with facial pain gradually recovered by taking goreisan in combination with carbamazepine. The administration of carbamazepine alone could not adequately improve the patient's pain, so goreisan was administered in combination. Therefore, carbamazepine could be lessened to the point where the pain could be controlled solely by goreisan after a while, and a drug-free condition was eventually achieved.

Standard Western medical treatment brings good results to patients usually, but when its effect is not enough, there are many cases helped by Kampo medicine. As in the above, there are various forms of treatment. For example, initial standard treatment may be combined with Kampo medicine when satisfactory results could not be obtained. The two treatments might be combined from the beginning, or temporarily. I hope the episode provided a glimpse of how modern medicine and Kampo medicine are integrated.

### **Episode 3:**

A 53-year old woman who was diagnosed as rectal cancer in January 2010 came to my clinic. Her cancer was in Stage IV with peritoneal dissemination, meaning in terminal stage, but she decided to undergo surgery and to seek help as much as possible. I told her that the most I could do is to lessen any damage she may incur from operative stress, and to reduce the side effects of anticancer drugs to a certain extent. Then, upon gaining her understanding, I consulted with her attending surgeon, and started a decoction of a hochuekkito-based prescription from a month before the operation.

On February 17, 2010, she was performed surgery to remove her rectal cancer. From March 9, intravenous injections of an anticancer drug

(FOLFOX) were begun. On this day, she had a CEA of 7.2 ng/dL and CA19-9 of 887.9 U/mL. Side effects were expected from the surgery and administration of the anticancer drug, she did not develop loss of appetite, diarrhea, nor aphthous stomatitis. Actually, her good appetite while the anticancer drug was surprising.

On May 25, her CT scan showed hepatic metastasis and peritoneal metastasis, and the anticancer drug regimen was changed. From June 9, she began receiving an administration of irinotecan hydrochloride, but as this caused diarrhea, she was given hangeshashinto extract (Kracie Pharma, Ltd., Tokyo, Japan), which eased her symptoms. On June 21, she developed aphthous stomatitis, which subsided after administering unseiin extract (Kracie Pharma, Ltd., Tokyo, Japan). Diverse symptoms, however, gradually appeared thereafter. She showed signs of temporary recovery by using shikonboreito in combination with her other treatments, but passed away on September 13, 2011.

This episode does not claim that Kampo medicine is effective against malignant tumors. It shows that Kampo medicine relieves the adverse effects from the standard treatments against malignant tumors. The standard treatments include surgery, anticancer drug treatment, or radiation therapy, but they are all invasive to the body, and the side effects are common.

The previous patient first received surgery to remove her tumor, immediately followed by chemotherapy. The administration of Kampo medicine from a month before her surgery mitigated the expected side effects of her following chemotherapy, and allowed her to live comfortably, albeit temporarily, to the point where she could prepare herself to bring down the curtain on her life. With the support of many friends, she passed away and went to heaven surrounded by her friends. She was alone about the fact that she did not have a

family, but after her death, her friends worked for her as her family members. I learned later how blessed she was to have such wonderful friends.

#### **Episode 4:**

A 54-year-old man visited me with complaints of a fever, sluggishness, and subtle pain in all his joints since the previous day. His fever would not go down even after a day, and moreover, he said he suddenly developed lower back pain and could not walk properly. Although his lower back aches, he said he came to my clinic seeking Kampo treatment primarily for his cold, as he is allergic to non-steroidal anti-inflammatory drugs (NSAIDs) and Calonal<sup>®</sup> (acetaminophen). His body temperature was 37.7°C. He seemed to have tremendous difficulty walking because of his lower back pain, and entered my office holding onto the wall.

He explained as follows. Last May and June, he was underwent surgery for anal fistula. He took Voltaren<sup>®</sup> (diclofenac sodium) and Loxonin<sup>®</sup> (loxoprofen) as part of his treatment, but stopped taking those medications on the third day, as he developed a rash and experienced swelling throughout his body. He underwent another surgery in November, and was cured of his anal fistula. Again, he was administered Loxonin, and again, he developed a rash. When he caught a cold at the end of the last year, he took an OTC drug, and again developed a rash throughout his body. Thereafter, he developed lower back pain and went to an orthopedic clinic. When he took the Calonal, he developed a rash again. After all, he wished to treat his cold with Kampo medicine because he could not take NSAIDs or acetaminophen any more.

I combined 2.5g of keishito extract (Kotaro Pharma, Ltd., Osaka, Japan) extract and 1.5g of eppikajutsuto extract (Kotaro Pharma, Ltd., Osaka, Japan) extract to prepare a prescription similar to keishinieppiichito, and told him to take it every two hours. I also told him to stop taking it when he

begins to sweat. He took the Kampo formulas four times, sweated, and brought his fever down. The next day, his body temperature was 36.6°C, and he said his sluggishness, sensation of heat, and joint pains were gone.

After the episode of common cold, he wished treatment for his lower back pain, which has gotten much better since the previous day but still aches. I therefore began treating his lower back pain.

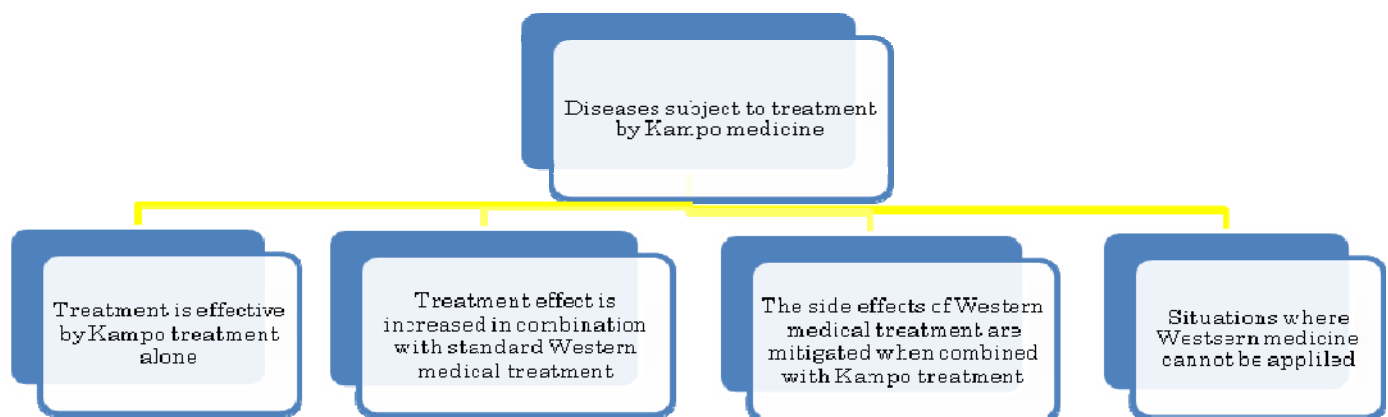
This episode shows that Kampo medicine can be used to easily cure diseases even in a patient who is allergic to standard treatment. As introduced above, he was allergic to many antipyretic analgesics. It is disputable whether antipyretic analgesics are required for common cold or influenza that begins with a chilly sensation. In Kampo medicine, it should be avoided to adopt the medications which “cool down heat” for the diseases because of “the invasion of coldness”.

Kampo medicine is extremely effective against many disease conditions that normally require the use of an antipyretic analgesic. Even if the above patient were not allergic to antipyretic analgesics, I would still have administered the above prescription without hesitation. This is because treatment of acute febrile illnesses is one of the greatest specialties of Kampo medicine.

### What the four episodes convey

Did you gain any new information from the above four episodes? To those who are well versed in Kampo medicine and Chinese medicine, they are not particularly rare cases. Actually I introduced them to show the roles that Kampo medicine could play in medical systems that are based on modern medicine. Furthermore, it should be noted that they each represent one of four types in the use of Kampo medicine in daily clinical practices.

The characteristics of each type are shown in the figure below<sup>2)</sup>.



Type 1: Kampo treatment is better than standard Western medical treatment, and is thus used alone

1) Cases where Kampo treatment is definitely better than standard treatment

Case 1: yokukansan for behavioral and psychological symptoms of dementia (BPSD)

Case 2: yojinkodakuto for chronic renal failure

Case 3: goreisan for headaches associated with a decrease of atmospheric pressure

Case 4: goreisan for earaches that occur when boarding an aircraft

Case 5: shakuyakukanzoto for muscle spasms

Case 6: shosaikoto, saikokeishito and saikoseikanto for recurrent upper respiratory inflammation in children

Case 7: juzentaihoto for perianal abscess in children

Case 8: juzentaihoto for recurrent otitis media in children

2) Cases where early healing or relief could be achieved by Kampo treatment

Case 1: A number of Kampo prescriptions for improvement of symptoms that occur before they are diagnosed as rheumatoid arthritis

Case 2: Kampo medicine represented by maoto for the early stages of influenza

Case 3: goreisan for the early stages of vomiting and diarrhea (mostly caused by rotavirus) among children

Case 4: Kampo medicine (kakkonto, maobushisaishinto, etc.) for the early stages of a cold

Type 2: The effects of standard Western medical treatment and Kampo treatment are both strengthened when the two are used in combination

Case 1: Combination of triptan and goshuyuto for migraine headaches

Case 2: Combination of carbamazepine and goreisan for trigeminal neuralgia

Case 3: Combination of MTX and Kampo medicine for rheumatoid arthritis

Case 4: Combination of antibacterials and daiobotampito for colonic diverticulitis

Case 5: Combination of kakkontokasenkyushin'i and standard treatment for purulent rhinorrhea

Case 6: Combination of inhaled steroids and Kampo medicine for bronchial asthma and COPD

Case 7: Administration of daikenchuto for bowel movement after intra-abdominal procedures

Type 3: The side effects of standard Western medical treatment can be mitigated in combination with Kampo treatment

Case 1: juzentaihoto, hochuekkito, etc. for loss of appetite caused by anticancer drugs

Case 2: ninjin'yoeito for mitigation of the side effects of anticancer drugs (mFOLFOX6 therapy)

Case 3: goshajinkigan for the neurotoxicity of anticancer drugs (FOLFOX therapy)

Case 4: shakuyakukanzoto for the neurotoxicity of anticancer drugs (taxane agents) and neuralgia

Case 5: hangeshashinto for diarrhea caused by anticancer drugs (irinotecan hydrochloride)

Case 6: ninjin'yoeito for anemia developed during ribavirin therapy for treatment of Hepatitis C

Case 7: juzentaihoto for anemia during interferon + ribavirin therapy for treatment of Hepatitis C

Case 8: saikokaryukotsuboreito for tachycardia caused by tocolysis (ritodrine hydrochloride) used in the treatment of threatened miscarriage or premature delivery

Case 9: bakumondoto, etc. for dry mouth caused by the administration of psychotropic drugs

Types 4: Treatment is needed, but standard Western medical treatment cannot be applied

Case 1: Cases where standard treatment cannot be applied due to a drug allergy

Case 2: Cases where standard treatment cannot be applied due to its side effects

Case 3: Cases where standard treatment is difficult due to age constraints

From the next issue and on, I will introduce each of the above patterns in detail, for case examples.

## References

1. Katayama K, Yoshino T, Munakata K, Yamaguchi R, Imoto S, Miyano S, Watanabe K. Prescription of kampo drugs in the Japanese health care insurance program. Evidence Based Complement Alternat Med. 2013; Article ID576973, 7 pages
2. Yasui, H. Characteristics of Kampo medicine as seen from the perspective of an integrated medical system. FY2013 Health and Labour Science Research Grant from MHLW (study for the development and promotion of regional medical foundations), "Standardization of the diagnostic method, prescription classification and terminology of Japanese Kampo from a global scientific perspective," (in Japanese), 2014.

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### [List of prescriptions]

shakuyakukanzoto: 芍薬甘草湯

goreisan: 五苓散

hochuekkito: 補中益気湯

hangeshashinto: 半夏瀉心湯

unseiin: 温清飲

shikonboreito: 紫根牡蛎湯

keishito: 桂枝湯

eppikajutsuto: 越婢加朮湯

keishinieppiichito: 桂枝二越婢一湯