

Kampo Medicine - Current Research

Kampo Treatment for Allergic Rhinitis and Hay Fever

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Introduction

More than 20% of Japan's entire population are said to be affected by allergic rhinitis, with the numbers further increasing yearly.

Standard treatment includes drug therapy using anti-allergenic drugs (oral medicine, nasal drops, eye drops, etc.), phylactic remedy (antigen avoidance) using goggles and masks, hyposensitization treatment, and surgical remedy. Most of these treatments work well and control the relevant symptoms through the hay fever season with continuous use. However, they are ineffective at times, or produce a strong side effect, and are not exactly without problems. Kampo drugs, on the other hand, have the power to fill in voids that Western medical treatment cannot address, and offer many advantages, such as imposing minimum physical damage even with prolonged use. In the 1970s when allergic rhinitis and hay fever began to garner attention, *kakkonto* and *shoseiryuto* were known to be effective. Thereafter, however, the symptoms have become complex, such that it has become increasingly difficult to treat the diseases with just a few varieties of Kampo prescriptions.

***Shoseiryuto* – Prescription most frequently used for wind-cold type allergic rhinitis**

Shoseiryuto has been used most frequently against allergic rhinitis since emergence of the disease. Many cases have been reported and studies are being actively pursued.

According to a double-blind randomized controlled trial conducted by Baba et al. using *shoseiryuto* for year-round nasal allergy, the group that was prescribed *shoseiryuto* displayed significant improvement compared to the placebo group. They achieved a solid result in terms of

general improvement, with 12.0% showing marked improvement, 32.6% moderate improvement, and 39.1% slight improvement, resulting in a usefulness of 46.2%³⁾.

Furuuchi et al. also conducted a study using *shoseiryuto* against year-round allergic rhinitis. Rate of efficacy was 45.0%, and reached as high as 77.5% when including “somewhat effective” cases. When looking at overall improvement by degree of severity, rate of efficacy was 56% among severe cases and 38.9% among mild cases. It was thus reported that *shoseiryuto* is highly effective particularly among severe cases⁴⁾.

Through these studies, it has been found that *shoseiryuto* is highly effective against roughly 45% of year-round allergic rhinitis cases, and extremely effective against another 12%.

Therefore, it is not an exaggeration to say that *shoseiryuto* is the foremost selected drug against allergic rhinitis and hay fever. A typical case is presented below.

A 47-year-old woman suffered hay fever symptoms every spring since ten years ago. In addition to typical symptoms such as sneezing, runny nose and nasal congestion, she also developed eye irritation. She preferred Kampo, because the drugs she used previously made her sleepy and impeded her daily life. She took a *shoseiryuto* extract and soon experienced a mitigation of her symptoms. As the prescription was effective for three to four hours, she took it three times a day. By early May, her symptoms had disappeared, and she stopped taking the prescription.

On January 22 of the following year, the patient's hay fever symptoms reappeared, so she once again took *shoseiryuto* like she did before, this time for two months. The patient continues to develop hay fever every spring, and comes to the hospital every year to receive a prescription for *shoseiryuto*. She would take *Olopatadine Hydrochloride* on an as-needed basis when her symptoms were severe, but for many

years until today, her short-term use of *shoseiryuto* allows her to live each day comfortably without the discomfort of any symptoms.

In this way, *shoseiryuto* is effective for many patients, but subsequent studies have begun to reveal that each patient's condition of allergic rhinitis is diverse even from the Kampo perspective.

Disease patterns and recent changes in allergic rhinitis

In Chinese medicine, allergic rhinitis is classified into wind-cold type, wind-heat type, and weakness type.

In the wind-cold type, a wind-cold pathogen (pathogen with cold properties) invades the body from outside. In the wind-heat type, a wind-heat pathogen (pathogen with properties of heat) invades the body from outside. In the weakness type, there is not enough healthy qi to protect the body against pathogens from outside.

In Japan, *shoseiryuto*, *kakkontokasenkyushin'i* and *senkyuchachosan* are used for the wind-cold type of rhinitis. *eppikajutsuto* and *shin'iseihaito* are used for the wind-heat type of rhinitis, and *hochuekkito* and *maobushisaishinto* are used for the weakness type of rhinitis.

In recent years, however, the symptoms of allergic rhinitis have changed somewhat from the Kampo perspective. This has to do with changes in the lifestyle environment (including foods and drinks) of modern people.

Even when clear snivel flows, as in the wind-cold type of rhinitis, if the patient wants something cold to drink, has a red tongue, or inner heat, the heat must also be cooled down at the same time.

This is related to the season, to a certain degree. In February, the outside environment is cold, so *r* is effective, but when the outside environment becomes warmer in March and April, some people experience stronger inner heat, along with the rise in ambient temperature.

Symptoms may also vary according to type of pollen. Cedar pollen is dispersed into the air in February and March, hinoki cypress pollen in April, pollen from orchard grass and other gramineous plants from May to early summer, and pollen from hogweed and other asteracea plants in autumn. Furthermore, the same patient may display different symptoms for cedar and cypress pollen.

Dr. Imanaka came across patients who showed symptoms of the wind-cold type of rhinitis but whose nasal mucosa was red and swollen or whose ocular mucous membrane became red. He judged that a wind-cold pathogen invaded the body from outside even though the patient had inner heat, and the patient experienced a mixture of cold and heat. Thus, he added *gokoto* to *shoseiryuto*, and observed a dramatic efficacy. He named the prescription *koryuto* by taking the “ko” (meaning tiger) from *gokoto* and the “ryu” (meaning dragon) from *shoseiryuto*.

Dr. Imanaka introduced the following patient to which *koryuto* was effective.

A 58-year-old man suffered hay fever every spring for 25 years. He experienced severe symptoms of runny nose, nasal congestion and eye irritation, but as he was a golf coach, he spent a lot of his time outdoors. He somehow dealt with his symptoms by taking *Fexofenadine Hydrochloride* that causes less drowsiness than other antihistamines, and also by using antihistamine eyedrops and steroid nasal drops, but he would still develop hay fever every year from February to early May. 2009 was a year of mass pollen dispersal, but thanks to the combined use of *shoseiryuto* and *gokoto* from March 11, he was able to spend the hay fever season comfortably without taking *Fexofenadine Hydrochloride*⁵⁾.

Dr. Imanaka says that in most cases, he prescribes *shoseiryuto* for hay fever around February, and adds *gokoto* around March when inner heat occurs. Contrarily, if there is a patient who has the

wind-cold type of rhinitis but cannot be treated adequately with *shoseiryuto*, he adds *maobushisaishinto*.

Actually, there is a certain characteristic to the abovementioned prescriptions.

shoseiryuto, *gokoto*, *kakkontokasenkyushin'i*, *eppikajutsuto*, and *maobushisaishinto* all contain *Ephedrae* Rhizoma. Ephedrine, the major ingredient of *Ephedrae* Rhizoma, was found to be contained in *Ephedrae* Rhizoma by a Japanese pharmacologist named Nagayoshi Nagai.

In subsequent studies by various other people, it was found that ephedrine has a sympathomimetic effect similar to adrenaline.

For this reason, it can be said that Kampo drugs such as *shoseiryuto* that contain *Ephedrae* Rhizoma is effective against allergic rhinitis by the action of ephedrine. Needless to say, these drugs are not made of a single ingredient, but exerts an effect by the synergy of many other drugs.

Nevertheless, when looking at short-term efficacy, Kampo drugs that contain *Ephedrae* Rhizoma begin to work after about twenty minutes of taking it, continues to be effective for about three hours, and thereafter gradually declines in efficacy, in most cases. For this reason, it is frequently necessary to consider the timing of taking the drug. In some cases, another dose needs to be taken at night. From the long-term perspective, there have been cases where general symptoms had improved unawares.

* Note: Most antihistamine drugs do not contain ephedrine, but in recent years, a new product (product name: Dillegra) has appeared, which adds ephedrine to fexofenadine hydrochloride (product name: Allegra). When taking this product in combination with a Kampo drug, it is necessary to pay attention to the concentration of ephedrine.

A new type, discovered just recently

The use of *ephedra* agents such as *shoseiryuto* is effective for only up to approximately 45% of patients and no more. The fact that there are around 30% of

patients who do not benefit from such drugs means different conditions must be assumed.

Allergic rhinitis mostly occurs in spring and autumn, as a result of a wind-cold pathogen or wind-heat pathogen invading the body. These are called “outer winds.”

On the other hand, “inner winds” are pathogens that occur inside the body. The mechanism by which allergic rhinitis is caused by “inner winds” has been simultaneously discovered and clinically applied by Drs. Ebe and Haimoto.

They thought that inner heat is originally generated by yin deficiency, and when it rises and becomes an inner wind, excess water around the chest rises and suddenly produces snivel. Their prescriptions differ, but they share the same concept.

Dr. Ebe's prescription⁶⁾

Menthae Herba 6 / *Chrysanthemi* Flos 15 / *Rehmanniae* Radix 15 / *Paeoniae* Radix 15 / Haematitum 15 / *Fossilia* Osis Mastodi & *Ostreae* Testa 15 each / *Gypsum* Fibrosum 30 / *Fritillariae* Bulbus 10 / Kasseki 15 / *Glycyrrhizae* Radix 6

Dr. Haitani's prescription⁷⁾

Rehmanniae Radix 7 / *Anemarrhenae* Rhizoma 15 / *Paeoniae* Radix Rubra 15 / *Glehniae* Radix cum Rhizoma 10 / *Ophiopogonis* Radix 10 / *Cnidii* Rhizoma 10 / *Menthae* Herba 3 / *Glycyrrhizae* Radix 5 / *Gypsum* Fibrosum 20

These prescriptions cannot be substituted with extracts, but *jiinkokato+senkyuchachosan* comes close. What must be noted here, however, is that there are cases where yin deficiency may have occurred from taking an antihistamine continuously. In this case, the above prescription should be used by reducing the amount of antihistamine as much as possible.

Within this type of rhinitis, there have been reports of cases where the patient was dramatically cured by taking a *bakumondoto*⁸⁾.

Prevention

In the case of year-round allergic rhinitis, it is necessary to make up for the lack of qi, also for prevention. *hochuekkito* and *rikkunshito* are commonly used with the addition of *maobushisaishinto*.

Even if it is seasonal, the above prescription should be prophylactically administered so the symptoms do not appear.

Spring hay fever should be treated from autumn or winter. *hochuekkito* should be mainly considered. Dr. Iwao Yamamoto administered *hochuekkito* along with *tokishakuyakusan* as a prophylactic⁹⁾.

Other prescriptions for health improvement include *saikokeishito* and *keigairengyoto*. Some signs for using *keigairengyoto* are whether the patient has a sinus problem or heat symptoms that accompany tonsil inflammation. People who develop hay fever symptoms from around January should be administered *tokishigyakukagoshuyushokyoto* from before they develop the symptoms. In some cases, the hay fever season ends without their experiencing any symptoms.

Combined use with Western drugs

Kampo medicines are completely a different type of drug from antihistamines. There is no problem in combining their uses, in most cases. If the patient's symptoms are severe and cannot be effectively mitigated using Kampo alone, using a drug that goes well with Kampo is recommended. The same applies for eyedrops and nasal drops.

There is a study on the combined use of Kampo and Western drugs, by Dr. Imanaka, who developed *shoseiryuto+gokoto* as mentioned above, along with Drs. Mine and Yamazaki¹⁰⁾.

According to the study, the efficacy rate of *shoseiryuto* administered as the foremost selected drug against allergic rhinitis (20 patients) was 45%. The efficacy rate of *eppikajutsuto* (24 patients) was 64% and even better.

The efficacy rate of *maoto+eppikajutsuto* prescribed to severe cases (7 patients) was 72%. In the case where *shoseiryuto+gokoto* were used in combination to strengthen the anti-inflammatory action of *Ephedrae Rhizoma* and *Gypsum Fibrosum* (16 patients), efficacy rate was 87% and exhibited an even better result. Of these patients, there were none who needed to use an oral steroid, and only one patient who complained of a heavy stomach feeling as a side effect.

Based on the above result, Dr. Imanaka et al. said that Western and Kampo drugs could be used in combination as an attempt to increase efficacy.

It should be noted that even if nasal symptoms are alleviated by Kampo treatment, allergy test values hardly change, and IgE RAST and IgE RIST values also show hardly any changes. However, there is no data on the results of long-term administration.

With regard to the combined use of Kampo drugs with other standard treatment, there have been no reports so far that any inconveniences have occurred.

References

- 1) Committee for Preparation of Nasal Allergy Treatment Guidelines: *Nasal Allergy Treatment Guidelines —Year-round Rhinitis and Hay Fever— (2016 edition)*, Life Science, 2015 (in Japanese).
- 2) Committee for Preparation of Nasal Allergy Treatment Guidelines: *Nasal Allergy Treatment Guidelines —Year-round Rhinitis and Hay Fever— (2016 digest edition)*, 2015 (in Japanese).
- 3) Baba S, Takasaka T, Inamura N, et al.: "Efficacy of *shoseiryuto* against Year-round Nasal Allergy — Double-blind Randomized Controlled Trial—," *Practica Oto-Rhino-Laryngologica* 88 (3) 389-405, 1995 (in Japanese).
- 4) Furuuchi et al.: "Study of the Clinical Efficacy of *shoseiryuto* against Year-round Allergic Rhinitis," *Allergy in Practice* 7: 502-513, 1987 (in Japanese).

- 5) Imanaka M: “Memorable Cases <1> Tsumura Medical Today,” Radio NIKKEI, Jan. 5, 2011 broadcast (in Japanese).
- 6) Ebe Y: “Spring Hay Fever Caused by Yin Deficiency,” *Clinical Journal of Traditional Chinese Medicine* Vol. 29, No. 1, 50-55, 2008 (in Japanese).
- 7) Haimoto H: “*Jibiinkoto* for Allergic Rhinitis Cause by Yin Deficiency,” *Φυτο*, Vol. 8 No. 2, 4-10, 2006.
- 8) Otsuka, Keisetsu, Domei Yakazu, and Totaro Shimizu: *Kampo shinryo iten (dictionary of Kampo medicine*, 247-248, Nanzando, 1964 (in Japanese).
- 9) Bando S: *Practice of Kampo Therapy Based on Disease Names*, Medical Yukon, 2002 (in Japanese)
- 10) Imanaka M, Mine H, Yamazaki T: “Clinical Efficacy of Kampo Combination Therapy against Cedar Pollen Allergy,” *Kampo Medicine*, Vol., 60, No. 6, 611-616, 2009 (in Japanese).