

## Case Report

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# The Use of Kampo Medicine for Acne: An Approach According to Five Exacerbating Factors

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### Abstract

Although the pathogenesis of acne has been elucidated, many patients do not notice improvement with standard treatments alone. Acne is a multifactorial disease, and although there are different aggravating factors such as diet, external stimuli, and stress that varies among individuals, the correct approach to tackling these factors has likely not been considered. Hence, we recommend using Kampo, a traditional Japanese medicine. Kampo examines a patient physically and mentally through unique concepts such as qi, blood, and fluid, and treats using Kampo medicines. With Kampo, both the illness and other aspects such as the general health and well being of the patient are examined and treated.

We believe that if Kampo is employed in identifying and treating the aggravating factors of acne of each patient, both the overall therapeutic effect and patients' motivation for treatment will be improved. This paper classifies the aggravating factors of acne into five categories, decreased barrier function of the skin, excessive secretion of sebum, exacerbation before menstruation, gastrointestinal symptoms, and stress, and introduces effective Kampo medicines in each case.

**Keywords:** Acne; Kampo; Kampo medicine; Jumihaidokuto; Shakuyakukanzoto

### 1. Introduction

In recent years, increasing attention has been paid to Kampo, a Japanese form of traditional medicine, in various fields such as the anti-aging and beauty industries. The benefit of Kampo is that both the illness and other aspects of

patients, such as their physical condition and general health, are examined and treated. Essentially, Kampo prescribes different treatments for different individuals, even for the same disease. Although the pathogenesis of acne has been elucidated, many patients do not notice improvement with standard treatments alone. Acne is a multifactorial disease, and despite the coexistence of different aggravating factors such as diet, external stimuli, and stress for each individual, suitable methods of dealing with these factors have possibly not been considered.

Therefore, in the treatment of acne, the author not only treats acne but also focuses on various disorders of each patient. In case there is an aggravating factor characteristic of acne, treatment with Kampo medicine is incorporated. Typical exacerbating factors of acne include decreased skin barrier function, excessive secretion of sebum, exacerbation before menstruation, gastrointestinal symptoms, and stress. This paper introduces effective Kampo medicines for these five symptoms.

## **2. Selection of Kampo Medicine Depending on the Physical Condition of Acne Patients**

### **2.1 Decreased skin barrier function**

Topical drugs such as Adapalene and Benzoyl Peroxide (BPO) recommended by The Japanese Guidelines for the Treatment of Acne Vulgaris [1] have a high therapeutic effect. However, for skin with low barrier function, a topical drug may be discontinued due to irritation. Hence, it is important to confirm a patient's skin barrier function on the first visit to the clinic so that he/she will not either be disappointed by the treatment or discontinue it.

In Japan since ancient times, a Kampo medicine called Jumihaidokuto [2] has been used to treat inflammatory diseases such as acne by suppressing inflammation of the skin. Jumihaidokuto can treat not only acne but also acute eczema and dermatitis. Based on this, the author, who believes that Jumihaidokuto not only improves acne but also reduces irritant contact dermatitis caused by topical agents, conducted a pilot study and reported its results [3]. Sixteen female acne patients were divided into two groups: 5 patients in the BPO single-administration group and 11 patients in the Jumihaidokuto-combination group. After 3 weeks of treatment, facial redness was evaluated. There was no difference in the therapeutic effect of acne between the two groups; however, the redness score of the face was significantly lower in the Jumihaidokuto group than in the BPO group. This result was reflected in the considerable satisfaction of the Jumihaidokuto combination group with the treatment. Further, a related research reported that symptoms, such as skin dryness, erythema, and pruritus induced in mice to which Adapalene was applied, were alleviated by the administration of Jumihaidokuto [4].

In a chronic inflammatory disease such as acne, a patient's satisfaction with the treatment and his/her willingness to continue it greatly influence treatment results. Therefore, the role of Kampo medicines in reducing redness and irritation during treatment is significant. In patients with a history of irritant contact dermatitis due to topical medicine or patients with severe skin dryness and decreased skin barrier function, administering Jumihaidokuto improves the skin barrier function. Thus, it is possible to reduce irritant contact dermatitis due to Adapalene or BPO.

Unlike antibiotics, there is no concern about resistant bacteria in Kampo medicines, and this is beneficial for continuing treatment.

We herein present the case of 37-year-old female treated with Jumihaidokuto. She presented with red papules and erythema with scales on her forehead, which sometimes caused itchiness. Jumihaidokuto 9.0 g/day was administered alone for 3 weeks. Thereafter, the treatment could be continued without irritation even after the topical drug was started (Figure 1).



**Figure 1:** Case: 37-year-old female (modified from reference [5]). (a) Before treatment; (b) After administration of Jumihaidokuto 9.0 g/day for 3 weeks.

## 2.2 Excessive secretion of sebum

Androgens secreted during adolescence are important for sebum synthesis. High levels of androgen in the blood have been reported to exacerbate acne [6]. In the treatment of acne, therefore, a drug that lowers androgen levels and suppresses sebum would be helpful. However, few such drugs available. Alternatively, Shakuyakukanzoto [2], a Kampo medicine, possesses antiandrogenic properties. Shakuyakukanzoto is used for intractable acne with hyperandrogenemia [7] and relieves symptoms such as excessive secretion of sebum and reddish face. Polycystic ovarian syndrome (PCOS), which is characterized by high androgen levels, has been reported to be associated with intractable acne [8]. In acne patients with PCOS-associated menstrual irregularity and hirsutism, Shakuyakukanzoto is effective. However, Shakuyakukanzoto contains a large amount of Glycyrrhizae radix, which often induces hypokalemia as a side effect. Therefore, it is better not administered for a long period.

We herein present a case treated with Shakuyakukanzoto. The patient was a 19-year-old female who presented to our clinic complaining of acne on the face line that worsened before menstruation, a reddish face, and open pores. Considering the excess secretion of sebum, Shakuyakukanzoto 7.5 g/day was administered for 2 weeks (Figure 2).



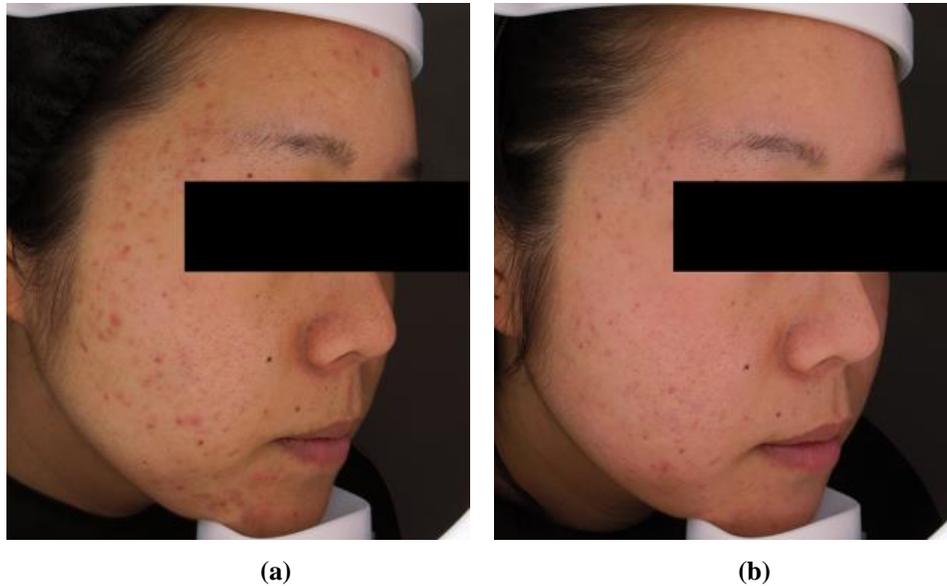
**Figure 2:** Case: 19-year-old female (modified from reference[5]). (a) Before treatment; (b) After administration of Shakuyakukanzoto 7.5 g/day for 2 weeks.

### 2.3 Exacerbation before menstruation

According to a survey conducted by our hospital, about 80% of female acne patients complain of worsening acne before menstruation. In Kampo, sex hormone imbalance is considered a condition wherein the "blood element" of the body is abnormal. We herein supports the position of Kampo. In Kampo, the human body is believed to comprise three elements: qi, blood, and fluid. "Qi" is life energy, "blood" includes blood and nutrient substances, and "fluid" is any body fluid other than blood (lymph, a digestive fluid, etc.). In Western medicine terminology, replacing qi with autonomic nerves, blood with hormones (endocrine), and fluid with immunity clarifies the concept. Inadequate, excessive, or disrupted circulation of these three factors can cause various health issues and diseases. Of these abnormalities, the disrupted circulation of blood is called "blood stasis (hemostasis)." With blood flow blocked in the skin, post-inflammatory erythema is more likely to persist even after the red papule has flattened, and post-inflammatory pigmentation becomes more likely. The typical symptoms of blood stasis include formation of dark circles around the eyes, dull and spotty skin, and dark reddening of the lips and tongue. Keishibukuryogan, Tokishakuyakusan, and Kamishoyosan [2] are typical Kampo medicines that can cure these symptoms. These Kampo medicines improve not only acne that often occurs before menstruation but also symptoms such as menstrual pain, irregular menstruation, premenstrual irritability, and swelling. Keishibukuryogan is administered for typical cases of blood stasis. Tokishakuyakusan should be administered to patients with swelling and slightly red papules. Kamishoyosan should be administered to patients who are irritable and have itching on the face line.

We herein present a case treated with Keishibukuryogan. The patient was a 19-year-old female who had developed acne on the face line since junior high school. The patient had been preparing for an entrance examination and was stressed, and her acne worsened before menstruation. There was irregular menstruation. A previous physician had treated the patient with Adapalene gel 0.1%, but her condition did not improve sufficiently. Thereafter, the patient visited our hospital. Keishibukuryogan 6.0 g/day was started to improve irregular menstruation and acne. Adapalene

gel 0.1% was continued as a once-daily application. Six weeks after administration, acne and skin tone improved, and menstruation had occurred (Figure 3).



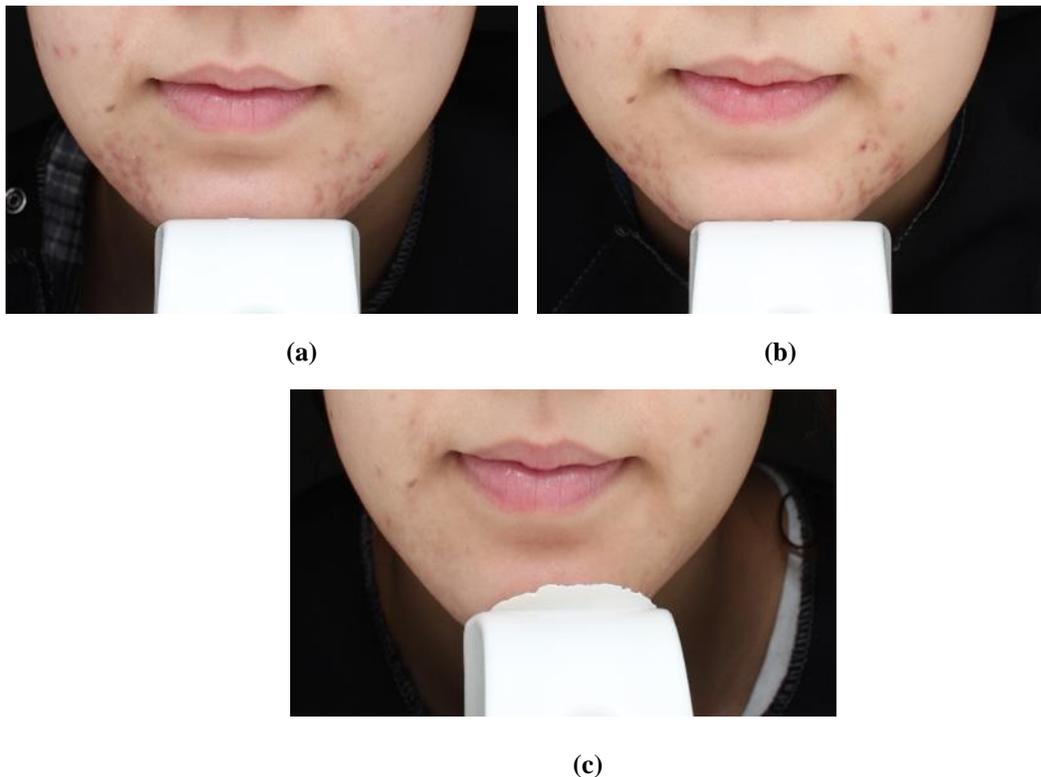
**Figure 3:** Case: 19-year-old female (modified from reference[9]). (a) Before treatment; (b) After administration of Keishibukuryogan 6.0 g/day for 6 weeks.

#### 2.4 Gastrointestinal symptoms

Gastrointestinal symptoms such as poor appetite, abdominal heaviness, diarrhea, and constipation may be aggravating factors of acne. Kampo teaches that if skin symptoms are intractable, then treatment must begin by targeting gastrointestinal symptoms. Thus, if acne proves intractable, gastrointestinal function is examined for any issues. In particular, the mouth is the entrance to the gastrointestinal tract, and is considered the site most reflective of the gastrointestinal condition. Therefore, when the acne and dermatitis around the mouth are difficult to treat, gastrointestinal symptoms should be treated. Rikkunshito [2] is a Kampo medicine that is useful in cases of poor digestive functions, such as poor appetite and abdominal heaviness, and gastrointestinal symptoms such as nausea and vomiting. Rikkunshito warms the gastrointestinal tract and improves gastrointestinal function, so its anti-acne effect is visible around the mouth.

If a patient has a sticky feeling in the epigastrium or heartburn, is prone to stomatitis, and has abdominal bloating and diarrhea, Hangeshashinto [2] is an effective Kampo medicine. When using these two agents, it is good to examine the condition of the tongue. If the tongue is big with clear teeth marks and is whitish, Rikkunshito is suitable. Conversely, if the tongue is not so large, has a reddish color, and is coated, Hangeshashinto is suitable. In Kampo, a treatment policy may be established by ascertaining the patient's condition via the abovementioned tongue examination.

We herein present a case treated with Rikkunshito. The patient was a 28-year-old female who had no history of acne during her teenage years. However, she began to develop many red papules on her chin three years ago. The patient had also suffered stress from divorce. She was treated with oral and topical antibiotics and topical retinoids by a dermatologist, but no effect was seen. Jumihaidokuto 9.0 g/day was prescribed, and after 3 weeks, the red papules decreased became flatter. However, the redness remained, and on inquiry, the patient was found to have a heavy stomach after eating. Her tongue was large and pale with teeth marks on the edges. When Jumihaidokuto 6.0 g/day and Rikkunshito 7.5 g/day were co-administered, the acne on the jaw showed improvement 6 weeks later (Figure 4).



**Figure 4:** Case: 28-year-old female (modified from reference [10]). (a) Before treatment; (b) After administration of Jumihaidokuto 9.0 g/day for 3 weeks; (c) 6 weeks after combined administration of Jumihaidokuto 6.0 g/day and Rikkunshito 7.5 g/day.

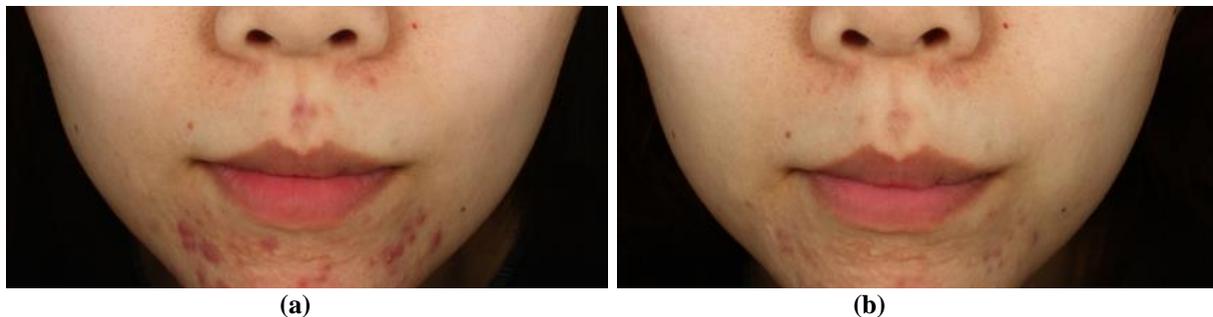
## 2.5 Stress

Stress causes physical and mental health problems and can lead to skin problems. In Kampo, a medicine called "Saiko-zai (Kampo medicine with Bupleuri radix)" is the first-line treatment in stress management. According to Kampo, Saiko-zai regulates the flow of qi (invisible life energy) and balances the mind and body. If resistance is felt at the costal margin during abdominal examination, Saiko-zai is indicated. Saiko-zai is often used for people with dark skins that tend to suppurate. People with this trait are prone to chronic inflammation and tend to have repeated

allergic diseases. A Kampo medicine called Saireito [2], one of the Saiko-zai, has been reported to have a steroid-like effect [11]. It is used for the treatment of hypertrophic scars and keloids for the purpose of suppressing inflammation and fibrosis. [12]. It has been reported that co-administration of Saireito and antibiotics for cystic nodular acne, a type of intractable acne, was effective in more than 80% of patients [13].

When women undergo stress, they experience difficulties such as irregular menstruation. However, for irritable individuals, prescribing Kamishoyosan, one of the Saiko-zai, improves not only acne but also redness, pruritus, and hot flashes of the face at the same time. Although many skin diseases are associated with stress, few treatments for stress reduction are available. For patients who have intractable skin diseases that might involve significant stress, choosing a Saiko-zai with the standard treatment is certainly an option.

We herein present a case treated with Saireito. The patient was a 26-year-old female who suddenly developed submaxillary acne after changing to a new workplace. Despite the use of antibacterial drugs and topical drugs, none of them were effective, and the patient was referred by another hospital. It was a case of refractory acne that developed due to stress, and the resistance was experienced in the lower costal arch. Hence, 12.15 g/day of Saireito was administered for 2 weeks. Then, with the treatment of topical drugs alone, there was improvement after 7 weeks (Figure 5).



**Figure 5:** Case: 26-year-old female (modified from reference [14]). (a) Before treatment; (b) 2 week administration of Saireito 12.15g/day, followed by 7 weeks of topical drug alone.

### 3. Towards an Acne Treatment that Patients Themselves Want to Continue

The treatment of acne, a chronic inflammatory disease, depends on how early the treatment is started, whether broad and appropriate topical treatment can be administered, and whether a treatment can be administered continuously for a long time. All of these are crucial for successful treatment. Although some patients believe in seeing a dermatologist only when the skin rash worsens, even a mild skin rash may cause scarring [15]. Therefore, medical staff must communicate the need to seek prompt medical care and continued treatment. Kampo medicine can be taken orally for long periods without concern over antibacterial resistance. Prescribing Kampo medicine will

increase patients' motivation for treatment and facilitate the continuation of standard treatment because it not only alleviates skin rash, but also corrects various disorders.

By studying Kampo, one realizes that it is important not only to eliminate the disease but also to enhance the self-healing power that a patient inherently possesses. To treat acne successfully, it is useful to use Kampo medicine to condition the body.

### **Conflicts of Interest**

The author declares no conflicts of interest.

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