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Case Report

Case Report for a Refractory Recurrent Aphthous Stomatitis Treated with *Jibaekpalmi-hwon*

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Objectives: This report reports a clinical case of a patient with recurrent aphthous stomatitis (RAS) for 10 years who was completely cured using Korean medicine.
Methods: A male patient with terribly severe RAS was hospitalized, and then treated with *Jibaekpalmi-hwon,* indirect moxibustion (KI 1 and CV 4) and acupuncture. The clinical outcome was observed by self-reported VAS measurement and macroscopy.
Results: The severity of stomatitis became improved gradually and completely recovered during 17 hospital days, and RAS has not recurred for three months as an outpatient. The blood test including complement activity was in the normal range.
Conclusions: This case report provides information about a therapeutic effect of *Jibaekpalmi-hwon* and Korean medicine on RAS.

Key Words : Stomatitis, recurrent aphthous stomatitis, Korean medicine, herbal medicine

Introduction

Stomatitis is defined as a mucous inflammation with painful ulcerations in the oral cavity. This disease is frequently observed in the general population and becomes cured spontaneously[1]. Stomatitis can be caused by poor oral hygiene, physical stimuli such as dentures and mouth burns, or suppressed immune condition including medications or radiation therapy[2]. This condition is also prevalent in subjects with nutrition deficiency such as iron, vitamin B and dietary protein[3].

There are several types of stomatitis according to the causes such as cold sore, herpetic stomatitis, angular stomatitis and aphthous stomatitis. Aphthous stomatitis, also known as canker sore, is a type of mouth ulcer presenting shallow and painful open ulcers inside the mouth[4]. This is the most common type of stomatitis. One study reported 0.5% of average point prevalence in Malaysia[5]. Recurrent aphthous stomatitis(RAS) is a painful condition of unknown etiology, and severe case with recurrent episodes impairs quality of life[6]. There is no specific management and treatment for RAS.

RAS is generally considered as the unbalanced status of *fire* and *water* according to Korean medicine, and long clinical experience has been practiced[7]. However, a literature survey showed lack of research-based investigation or clinical study. This study reports a case of a patient who had suffered

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from stubborn RAS continually for ten years but was cured by Korean medicine-based treatments including *Jibaekpalmi-hwon*.

Report of the case

1. Characteristics of patient and medical history

A 58-year-old man visited an Oriental hospital with severe and multi-placed ulcerations of the tongue. He had been suffering from he chronic tongue inflammation, which was diagnosed as a recurrent aphthous stomatitis(RAS) at several western hospitals. His RAS had been continuous almost all the year round and the patient had had difficulty with food intake. The symptoms had begun ten years ago, and no treatments of western medicines from various general hospitals had reduced the distress in aspects of severity or duration of the stomatitis. The status of stomatitis symptoms at hospital-visiting time point was not much different from the conditions experienced in the past.

The patient decided to treat the disorder with Korean medicine, so he was hospitalized in an Oriental Hospital. The patient was of short height without fatty appearance. The patient showed no abnormal vital signs including blood pressure, heart rate, body temperature or blood glucose level. The patient hadn't used alcohol or smoked usually, and had no specific family and past history. His occupation was farming, and he was not under psychological stress.

2. Treatments and course of symptom

The patient was cared for as an inpatient for 17 days followed by outpatient treatment for three months. The physical examination showed a normal range in laboratory test and radiological screening including abdominal ultrasonography. Additionally, the complement activity test was within normal levels. However, he had complained of a reddish face which started with his stomatitis, and a tendency of dry mouth. Based on symptom differentiation, the patient was given Jibaekpalmi-hwon (three times per day) as a decoction and other treatments such as indirect moxibustion (KD1 and CV4), acupuncture (mainly at HT3, KD3, SP3), and application of a miso (fermented bean paste) pack on the abdomen daily.

The evaluation of symptom change was recorded by self-reported visual analogue scale (VAS), justified as 10 points for the condition of severe difficulty in eating and speech contrary to 0 points for the condition of no inconvenience in oral cavity. After three days in hospital, the patient subjectively presented the reduction of pain. On the seventh hospital day, the tongue inflammation was objectively subsided with near-complete disappearance of pain and eating difficulty. The patient had almost recovered subjective feeling including ocular inspection inside the mouth on the fourteenth hospital day (Table 1 and Fig. 1).

The composition of *Jibaekpalmi-hwon* was as follows: 16g of Rehmanniae Radix, 8g each of Dioscorea Radix, Corni Fructus, Poria, Moutan Root Bark, and Alismatis Rhizoma, and 6g each of Anemarrhena rhizome and Phellodendri Cortex.

Discussion and Conclusion

In general, RAS is characterized by recurrent, multiple, small, round, or ovoid ulcers, with circumscribed margins having yellow or gray floors[8]. 80% of RAS is mild cases having ulcers from 8 to 10 mm insize at most commonly the nonkeratinized mucosal surfaces like labial mucosa, buccal mucosa, and floor of the mouth. The ulcer heals within 10-14 days and happens again at intervals of a few months to a few days in patients who are otherwise well[9]. The other type of RAS, also called as Sutton's disease, affects about 10-15% of patients. Ulcers exceed 1 cm in

Table 1. Change of stomatitis-associated symptoms

Treatment days		VAS scale *	Summary of general symptoms
In-patient	0	10	Impossible to eat normal food, severe tongue pain
	7	5	Remarkable reduction in eating difficulty and pain
	14	2	Almost no difficulty in food intake and no pain
	17#	1	No difficulty in food intake and almost no pain
Out-patient	30	0	No recurrence of stomatitis
	60	0	No recurrence of stomatitis
	90	0	No recurrence of stomatitis

* VAS: visual analogue scale. The patient pointed out his symptoms according to the distress status of oral activity. 10 points indicated the most severity as the endurable condition whereas 0 points expressed no distress. # indicates the day when the patient was discharged from hospital.

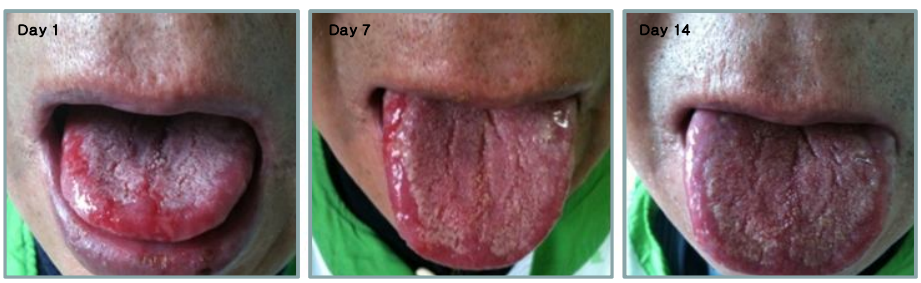

Fig 1. Appearance change of the tongue sores and ulcerations

diameter, and the most common sites of involvement are lips, soft palate, and fauces but occasionally dorsum of the tongue or gingival, persisting for up to 6 weeks[10].

In this report, the patient presented more severe symptoms of Sutton's disease because the ulcers had affected the whole tongue, buccal mucosa, and gum, as round or irregular shapes. Around ten years ago, the stomatitis had begun without any specific cause, and progressed gradually in aspect of pain strength, number of ulcers, and duration. In recent years, the symptoms became worse terribly, persisting all year round without complete recovery for even a short period. The patient had undergone repeated physical tests including biopsies in multiple hospitals, but doctors couldn't explain a clear cause nor provide an effective therapy.

The etiology of RAS is unclear, but several predisposing factors are strongly suggested. About 40% of patients have a family history, and deficiencies of iron, vitamin B12, and folic acid predispose development of RAS[11,12]. Psychological stress may act as a triggering or modifying factor in susceptible RAS patients[13]. The patient had no family history or stressful environment. Cigarette smoking is thought to be negatively associated with RAS owing to the mechanical and protective barrier against trauma and microbes created by smoking-induced mucosal keratinization(14). Then, the patient didn't smoke. The complement system is belonged in innate immunity, and the immunity is thought to be linked to stomatitis[15]. So functional screening of complement was conducted, and the complement activity was within the normal level.

So far, no curative treatment for RAS exists. Antimicrobials, steroids, immunomodulation, analgesics, or anti-inflammatory agents are given to patients topically or systematically[16]. The patient in this case

didn't see any improvement from such western medications nor through supplements such as red ginseng, vitamins, and minerals. One well-designed clinical study presented the non-effect of multivitamin therapy on the reduction in the number or duration of RAS[17].

From the KM point of view, the causes of RAS have been considered as the *kidney yin deficiency with fire effulgence, frenetic stirring of the ministerial fire*, unbalanced status of *qi* and *blood* or *Yin* and *Yang*[18]. The patient was diagnosed as a status of "*kidney yin deficiency with fire effulgence*". The differentiation of *Sasang* Constitutional Medicine (SCM) classified him as a *So-yangin* using the QSCC II method. *Jibaekpalmi-hwon* is a formula composed of Anemarrhena rhizome and Phellodendri Cortex within *Yukmijihwang-tang* which is a typical Yin-tonifying herbal drug[19].So far, no data presented the efficacy of *Jibaekpalmi-hwon* against stomatitis including RAS. Acupuncture at HT3, KD3, SP3was applied according to the SCM-based treatment. The acupoints of KD1 and CV4 for indirect moxibustion has been believed to enhance the aspect of "*water*"[20]. The daily application of a miso pack on the abdomen purposed the acceleration of gastro-intestinal motility and detoxification of the digestive track. The patient responded dramatically and was cured almost completely within 17 days. After getting out of the hospital, the patient remained afraid of recurrence of his stomatitis, so he visited an Oriental hospital for continuous treatment once a week for three months. His symptoms completely disappeared and have not recurred.

Many cases of RAS seriously impair the quality of daily life, and patients meet painful difficulties due to lack of definitive therapeutics. This report has a limitation of only one clinical case treated completely by Korean medicine. However, this report may provide impressive information of the possible therapeutics against RAS using Korean medicine. Further studies are required to demonstrate the efficacy of *Jibaekpalmi-hwon.*

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