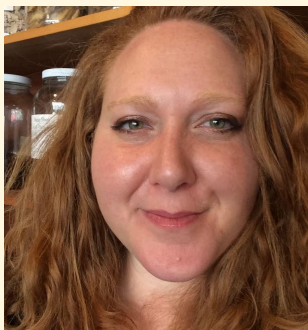


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## A Case Report of Burning Mouth Syndrome Treated with Acupuncture and Traditional Chinese Herbal Medicine

By Alison Loercher, DAOM, LAc

### Abstract

Burning mouth syndrome (BMS) is characterized by chronic intraoral pain that affects approximately one-quarter of postmenopausal women. Its etiology is unknown, and it often evades treatment. This case report of a 61-year-old female with chronic burning mouth syndrome explores the use of acupuncture and Chinese herbal medicine in the treatment of BMS. Over the course of five acupuncture treatments and continuous Chinese herbal therapy for four months, BMS pain was eliminated. This report suggests that acupuncture and Chinese herbal medicine may be promising clinical interventions for treating burning mouth syndrome.

**Keywords:** burning mouth syndrome, acupuncture, Chinese herbal medicine, menopause, case report

### Introduction

Burning mouth syndrome (BMS) was first described in biomedical literature in the early 1800s but only defined as a distinct condition in 2004 (Coculescu et al., 2014; Périer & Boucher, 2019; Zakrzewska & Harrison, 2002). Symptoms include a chronic painful burning sensation of the intraoral cheeks, gums, and tongue, dryness of the mouth, changes in taste, and other abnormal sensations within the mouth (Zakrzewska & Harrison, 2002). Biomedical etiology, pathogenesis, and reliable treatment remain elusive despite ongoing research. Diagnosis includes pain levels present for at least two hours a day for three or more months. BMS may be due to one or several simultaneous etiologies, including central neuropathy, oral trauma, vitamin deficiency, mood disorders, and miscellaneous neurological factors, though the definite etiology is unknown. The prevalence worldwide is estimated to be 1.73%. Women are

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more affected than men and more likely to be over fifty years of age (Feller et al., 2017; Tu et al., 2019, Wu et al., 2022).

A clinical management algorithm was published in 2018. Intraoral medications are typically topical preparations of lidocaine, clonazepam, or doxepin. Systemic use of tricyclic antidepressants, selective serotonin reuptake inhibitors, serotonin-noradrenaline reuptake inhibitors, anticonvulsants, opioids, or benzodiazepines may also be used. Many of these medications have unwanted effects. Acupuncture was only recommended for refractory painful BMS (Aronson, 2015; Eban, 2019; Kim et al., 2018). Treatments discussed in other studies are topical solutions of capsaicin, alpha-lipoic acid, laser therapy, cognitive-behavioral therapy (CBT), mindfulness meditation, and relaxation techniques (Barbosa et al., 2018; de Souza et al., 2018; Feller et al., 2017). A 2021 Cochrane review found that of hormone replacement therapy, antidepressants, analgesics, CBT, and vitamin supplementations, only CBT demonstrated a significant effect for BMS sufferers (Zakrzewska et al., 2001). Essentially, Cochrane reviewers only recognized learning how to live with the condition as an effective treatment strategy. Pain improves with treatment in one-third of cases within three to six months and resolves within six to seven years (Tu et al., 2019; Zakrzewska & Harrison, 2002). Clearly, additional research is needed to find a reliable solution for those suffering from BMS.

Due to the complex nature of traditional Chinese medicine (TCM) diagnostic systems, it is particularly suited to address biomedically idiopathic conditions that may have multiple causative factors. TCM perspectives on BMS may begin with a traditional medical evaluation of the sensations of heat and pain. Each may be diagnosed as excess or deficient heat, qi and blood stagnation, or wind. An additional consideration is the acupuncture meridians that pass through the oral cavities. These include the Large Intestine channel of the hand yangming, the Stomach channel of the foot yangming, the Spleen channel of the foot taiyin, the Kidney channel of the foot shaoyin, the Liver channel of the foot jueyin, and the Heart channel of the hand shaoyin, as well as the extraordinary channels of the Ren mai, Du mai, and Chong mai. These channels either surround the mouth or branch internally to the root of the tongue (Baker et al., 2008). Pathology in any of these channels alone or in combination could cause the sensations described in BMS.

There has been research on acupuncture and BMS, but there have yet to be systematic reviews. Studies comparing acupuncture to clonazepam found that acupuncture was as effective as clonazepam without the associated side effect of drowsiness. For patients with BMS symptoms while taking clonazepam, acupuncture reduced visual analogue scores (VAS, a validated instrument to

measure pain) and increased rest (Jurisic Kvesic et al., 2015; Diep et al., 2019). Another study showed that laser stimulation of acupuncture points reduced the pain associated with BMS by an average of 55.2% (Brailo et al., 2013). Another study looking at the effect of acupuncture on oral microcirculation found that acupuncture treatment given for three weeks was effective in relieving BMS 18 months later (Scardina et al., 2010). A preliminary trial of acupuncture combined with auricular therapy found that 7 out of the 11 patients studied reported a VAS scale of 0 after treatment (Franco et al., 2017).

There are fewer herbal studies on the potential effect of herbal medicine on BMS and none strictly on traditional Chinese herbal medicine (CHM). One review of traditional Japanese herbal medicines for oral pathology found connections between potential etiologies of BMS in experimental animal studies (Yamaguchi, 2015). A case study on the use of CBT along with the Kampo formula Goreisan, also known as Wu Ling San (fu ling (Sclerotium Poriae cocos), zhu ling (Sclerotium Polyporus), ze xie (Rhizoma Alismatis), bai zhu (Rhizoma Atractylodis macrocephalae), gui zhi (Ramulus Cinnamomi)), demonstrated significant relief (Okayasu, I., 2023). A double-blinded, placebo-controlled study of a Brazilian herbal medicine called "catuama," a compound of extracts of plants Paullinia cupana, Trichilia catigua, Zinziber officinalis, and Ptychopetalum olacoides, showed symptom reduction of 51.3% after twelve weeks (Spanemberg et al., 2012). Another trial of crocin, a compound isolated from saffron, found its effects were comparable to the use of citalopram in BMS patients (Pakfetrat et al., 2019).

## Case Description

A 61-year-old female presented at the clinic with burning mouth syndrome, previously diagnosed by her primary care physician. She had been experiencing mouth pain for two to three years and had not found any treatment that provided significant relief. Pain was felt on her tongue, gums, and the insides of her cheeks. While she had little pain immediately upon waking, it would begin soon after eating and intensify throughout the day. Any food or drink could increase pain, but acidic foods were the worst.

In addition to BMS, the patient had been diagnosed with allergic rhinitis, osteoarthritis in all proximal-interphalangeal joints of her fingers, insomnia, and depression. She also experienced severe vaginal dryness with burning, hot flashes, and mood disturbances that she associated with stress and grief. The vaginal burning and dryness had begun approximately ten years prior to the onset of menopause. However, they had resolved until flaring again along

with the symptoms of BMS and hot flashes two to three years prior. She noted that these years had been stressful with increased financial instability and caretaking for elderly parents.

Her diet was generally high in fruits, vegetables, and lean proteins and low in carbohydrates. She had tried changes in diet to mitigate the symptoms of BMS with no success. She often felt insatiably hungry and experienced some flatulence and bloating with meals. She reported constipation despite a daily bowel movement and managed this by eating nuts and an occasional home enema. She often felt thirst not relieved by drinking.

She managed insomnia with over-the-counter sleep aids and treated allergic rhinitis with the pharmaceuticals Allegra and Flonase. She found that both the use of Flonase and dissolving coconut oil in her mouth provided temporary relief from oral pain. Her tongue was slightly swollen, uncracked, and dusky in color with a thick, dry, and yellow coat. The pulse was thin, thready, and deep in all positions. She had an extremely thin body type and pronounced facial wrinkles, more than average for her age. Her voice was high-pitched, and her disposition sharp.

## Diagnosis

The disease diagnosed was "jingduan qianhou zhuzheng," translated as "manifestation patterns associated with the cessation of menstruation" (Scheid, 2007). The TCM pattern diagnosis was Liver and Kidney yin deficiency, deficiency heat, and Liver overacting on the Stomach, causing Stomach fire flaring.

The etiology for this patient is multifactorial, combining her postmenopausal age with her perceived level of stress. Yin deficiency of the Kidney is evidenced by the symptoms of increased dryness in the skin and vaginal tissues and bony changes in the hands. The yin deficiency was likely further exacerbated by emotional stress taxing both the Liver and Kidney. Both Kidney yin deficiency and Liver qi stagnation are patterns commonly found with insomnia, which will exacerbate both patterns by continuing to deplete the Kidney yin. Kidney yin deficiency can result in Liver yin deficiency, as the Kidney is the parent organ of the Liver. Liver yin deficiency can further exacerbate Liver qi stagnation. The result is a complex pattern of heat, including deficient and excess heat generated by both the Kidney and the Liver. This heat easily agitates the Heart, resulting in a pattern of Heart and Kidney not communicating. Liver heat easily influences the Stomach, resulting in a pattern of Stomach fire flaring. The Kidney, Heart, Liver, and Stomach

channels all pass through the mouth, making oral symptomology understandable through this pattern diagnosis.

## Treatment

The treatment included acupuncture and Chinese herbal medicine, with five clinic visits over four months. The treatment principles were to clear heat, cool Stomach fire, soothe Liver qi, and nourish Kidney yin. Acupuncture points included a selection of those found in the chart below at each of five treatments, needled with an even method due to patient sensitivity with Balance Spring Handle brand 34 gauge 30-millimeter needles.

Point Indication
KI2 (Rangu): Clear deficiency heat
KI6 (Zhaohai): Clear deficiency heat
SP6 (Sanyinjiao): Nourish yin, Move blood
LU7 (Lieque): Nourish yin
LI11 (Quchi): Clear heat
LI4 (Hegu): Guide treatment to mouth
HT7 (Shenmen): Calm shen
ST8 (Touwei): Guide treatment to head, clear Stomach channel
ST7 (Xiaguan): Guide treatment to head, clear Stomach channel
LI3 (Sanjian): Clear heat from yangming
PC9 (Zhongchong): Clear heat
Taiyang: Calm shen, guide treatment to head
LR3 (Taichong): Course Liver
LR8 (Ququan): Nourish Liver
Auricular shenmen: Calm shen, stop pain
Auricular Liver: Calm shen, nourish Liver
Auricular Kidney: Calm shen, nourish Kidney

Table 1.

The herbal formula given was a modified combination of Yu Nu Jian and Er Zhi Wan (Bensky et al., 2004). It was focused on nourishing yin and clearing heat. The granules used were from SunTen company. All formulas were dosed at five grams twice a day.

<b>Herbal Treatment, Indications, and Modifications</b>
Han lian cao (Herba Ecliptae): 6 grams, nourish yin
Nu zhen zhi (Fructus Ligustri Lucidi): 6 grams, nourish yin
Sheng di huang (Radix Rehmanniae): 18 grams, clear heat, cool blood
Mai men dong (Radix Ophiopogonis): 6 grams, nourish yin
Tian men dong (Radix Asparagi): 6 grams, nourish yin
Xuan shen (Radix Scrophulariae): 6 grams, clear heat, cool blood, direct formula to mouth
Shi gao (Gypsum Fibrosum): 24 grams, clear heat
Zhi mu (Anemarrhena asphodeloides): 4 grams, drain fire, protect Stomach from shi gao
Huai niu xi (Radix Achyranthis Bidentatae): 6 grams, descend heat, move blood
<b>Modifications at visit 2:</b>
Di gu pi (Cortex Lycii): 12 grams, clear heat
Yu zhu (Rhizoma Polygonati Odorati): 12 grams, nourish yin
<b>Modifications at visit 3:</b>
Shi gao, zhi mu, Huai niu xi removed
Bai shao yao (Radix Paeoniae Alba): 12 grams, nourishes yin, relaxes muscles and tendons
<b>Modifications at visit 4:</b>
Mai ya (Fructus Hordei Germinatus): 12 grams, aid digestion
Shan yao (Dioscorea japonica): 12 grams, nourish qi of Spleen, Stomach, and Kidney

Table 2.

Herbal prescriptions were stopped after a total of four months of continuous use.

## Outcome

The patient experienced significant relief immediately following her first acupuncture visit. The pain level was reduced and restricted to the tongue, and she could enjoy spicy foods again without discomfort. The tongue pain was also wholly resolved after the second acupuncture visit. At the fourth visit, the patient noted that she had run out of herbs between visits and that symptoms had begun to reoccur. She received a refill and another acupuncture treatment, which relieved the symptoms again. At her fifth and last visit to the clinic after four months of continuous herbal treatment, the patient noted that burning mouth syndrome symptoms were only returning intermittently when significant life stressors were present.

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## Discussion

This case demonstrates the success of a combined approach of acupuncture and traditional Chinese herbal medicine for a 61-year-old female with chronic burning mouth syndrome. After over two years of suffering from intraoral pain, five acupuncture treatments and individualized herbal medicine for four months significantly ameliorated the pain.

This patient displayed classic signs of both excess and deficient heat. Excessive hunger, insatiable thirst, and constipation are common signs of excess heat. Vaginal dryness, night sweats, hot flashes, and insomnia are commonly seen in patients with deficient heat. The excess and deficient heat were treated simultaneously using acupuncture and herbal medicine. While it is a reasonable treatment strategy to either clear the excess or nourish the deficient, it is possible that, in this case, the simultaneous clearing of excess and deficient heat while nourishing the yin allowed for success. It also seems clear that both acupuncture and herbal medicine were effective as the patient received benefits immediately after the first acupuncture treatment, but also noted that running out of herbs throughout the course of treatment increased symptoms. This combined approach allowed the patient to have access to treatment not only when in the office for acupuncture but daily when taking her prescribed herbal formula, based on the same diagnosis as the acupuncture treatment. It is interesting to consider that after treatment, the patient only noticed pain in the presence of life stress. Exploring this outcome according to TCM diagnostics, the heat present may have been cleared and the yin nourished enough to provide daily relief except when additional heat was generated by emotional factors causing stagnation, reflecting the potential for multiple biomedical etiologies of BMS.

While this case is a successful application of acupuncture and Chinese herbal medicine to treat BMS, it is also possible that other factors are at play. Because BMS may have multiple etiologies, it may be that one or more of these fell away during the course of treatment. While the 2018 published algorithm for the clinical management of BMS (Kim et al., 2018) only recommends acupuncture for BMS sufferers who do not respond to other treatments, it could be helpful for many who do not wish to use pharmaceutical approaches or for those who want to shorten their time to healing. Further research is needed to cement the potential role of acupuncture for BMS. Given the complex diagnostic nature of this case and the multiple modalities at play, a study design allowing for complex clinical interventions is recommended.

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## Conclusion

It is clear from the current published research on acupuncture and BMS that more study must be done if acupuncture, herbal medicine, or a multi-modality holistic treatment is to be evidenced as successful management for burning mouth syndrome. However, we should keep in mind recommendations from the Society for Acupuncture Research for "whole systems research" and "surveys of real-world clinical practice" (Langevin et al., 2011). In this case, traditional Chinese medicine diagnostics were an essential part of developing the approach for the individual patient, and the treatment principles used in this case may not apply to all patients diagnosed with BMS. Given the lack of current evidence-based treatment options for BMS, acupuncture and herbal medicine should be considered by patients looking to reduce symptoms and shorten resolution time.

## Consent and Safety

The patient provided written consent for treatment and a copy is on file with the author. All identifying personal health information has been removed. There were minimal safety concerns during treatment, and no adverse events were reported.

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