

## General

# Burning Mouth Syndrome Treated with Mandibular and Maxillary Nerve Blocks

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Keywords: burning mouth syndrome, oropharyngeal pain, chronic pain, pain, nerve blocks

<https://doi.org/10.52965/001c.71456>

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## Health Psychology Research

Vol. 11, 2023

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Burning mouth syndrome is a condition characterized by a painful burning sensation in the oral mucosa lasting at least 3-6 months with no definitive etiology. The pathophysiology is not well understood, though there appears to be a connection with other neuropsychiatric conditions such as depression, anxiety, and mood disorders. We briefly discuss our experience with a patient who suffered from this condition and how it was treated with mandibular and maxillary nerve blocks after failing more conservative pharmacological options.

### Letter To The Editor,

Burning mouth syndrome is a condition characterized by a painful burning sensation in the oral mucosa lasting at least 3-6 months with no definitive etiology.<sup>1,2</sup> The pathophysiology is not well understood, though it is typically seen in females in the peri-menopausal and post-menopausal periods.<sup>2,3</sup> This is typically a diagnosis of exclusion after ruling out other etiologies of oropharyngeal conditions. Interestingly, there has been a connection with this condition to some neuropsychiatric conditions such as depression, anxiety, and mood disorders.<sup>4</sup> We briefly discuss an interesting case of a patient who was referred to our pain management clinic from her psychiatrist for consideration of interventional options for this difficult condition.

Our patient was a post-menopausal female in her 60's who had been suffering from burning mouth syndrome on the left side for over one year. She also had a past medical history significant for depression and anxiety managed by her primary care physician as well as psychiatrist. She was evaluated previously by neurology as well as otolaryngology and diagnosed with burning mouth syndrome after excluding all other possibilities. She had trialed multiple pharmacologic agents including gabapentin, pregabalin, duloxetine, amitriptyline, carbamazepine, viscous lidocaine, and opioids. She noted nearly constant pain that interfered with eating as well as dramatically disrupted her sleep. Given that she had failed multiple pharmacologic options we decided to pursue mandibular and maxillary nerve blocks on the left side as there have been some emerging reports describing this treatment option.<sup>5</sup>

After appropriate consent was obtained the patient was placed supine on the procedure table and was prepped and draped in sterile fashion. Utilizing manual palpation and fluoroscopy, the coronoid notch was identified. A 25-gauge 3.5 inch spinal needle was inserted below the zygomatic arch and advanced until it made contact with the pterygoid plate. The needle was repositioned to target the mandibular and maxillary nerves. Contrast was injected under fluoroscopy to rule out vascular uptake. Next a solution of 3mL of 0.25% bupivacaine, 1mL of preservative free normal saline and 10mg of dexamethasone was slowly injected around the nerve branches and the needle was withdrawn. The patient tolerated the procedure well. There were no complications. The patient reported oral numbness shortly after the procedure. She reported nearly 90% relief at her 2 week follow up and roughly 75% relief at her 6 week follow up.

Burning mouth syndrome can be an extremely difficult condition to treat. We believe this letter is of importance to the readers as there appears to be an association of burning mouth syndrome with other neuropsychiatric conditions. Physicians who encounter these patients should first refer these patients for evaluation of other etiologies. Additionally, these patients may benefit from a trial of neuropathic medications which can be helpful for both chronic pain and psychiatric conditions.<sup>6,7</sup> Our case demonstrates a possible therapy that can be considered for refractory cases of this condition, though more research on this is ultimately needed.

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