### Background
Burning Mouth Syndrome (BMS) is a complex pain condition of the oral cavity characterized by a burning sensation without clinical or laboratory abnormalities. It affects an estimated 0.1-3.9% of the general population. BMS can originate in the central nervous system or the peripheral nervous system and is frequently accompanied by depression, anxiety, and/or somatic symptom disorder. The overlap of pain, neurologic pathophysiology, mental health and impaired quality of life highlight the need for collaboration among specialists in its identification and treatment.

### Case
Our patient is a 48-year-old female whose burning mouth pain began in 2012. She underwent a complete physical exam and laboratory workup that did not reveal any abnormalities. From 2012-2014 she had numerous and frequent visits to the emergency department, her primary care provider, psychiatrists, and specialists for uncontrolled oral discomfort. She underwent two endoscopies and multiple medication trials, including antiepileptics, antidepressants, antipsychotics, antibiotics, antivirals, antifungals, antacids, topical analgesics, and mood stabilizers, with only mild transient improvement of symptoms. This culminated in psychiatric hospitalization for anxiety and suicidal ideation related to her ongoing oral pain. She was started on clonazepam and given more frequent follow up with her psychotherapist, which gradually lead to a resolution of oral discomfort. Her symptoms remain in remission with psychotherapy and clonazepam.

### Neuropsychiatric Pathophysiology

<table>
<thead>
<tr>
<th>Central Nervous System</th>
<th>Peripheral Nervous System</th>
<th>Psychological</th>
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<tbody>
<tr>
<td>Trigeminal system pathology in the brainstem</td>
<td>Abnormalities in small Aδ taste afferents</td>
<td>Depression</td>
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<tr>
<td>Whole brain hypofunctioning</td>
<td>Small fiber neuropathy</td>
<td>Anxiety</td>
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<tr>
<td>Reduced striatal dopamine</td>
<td>Trigeminal system neuropathy</td>
<td>Alexithymia</td>
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### Discussion
Primary BMS is a diagnosis of exclusion with a poorly understood etiology. Abnormalities in the central and peripheral nervous systems along with psychiatric disorders have been implicated in its pathophysiology. Current treatments are directed at symptomatic relief with inconsistent short- and long-term results. There is some evidence for long-term benefit from psychotherapy, clonazepam, gabapentin, alpha lipoic acid, and capsaisin oral rinse. Given that BMS is often comorbid with depression and anxiety and is often managed with psychotropic medications, it is a condition consultation psychiatrists should be able to recognize and treat.

### Conclusions
BMS is a complex pain condition with an associated psychosomatic component, making it an important condition for consultation psychiatrists to be aware of. Though it remains a diagnostic and treatment challenge, better outcomes may be attained with collaboration between psychiatry, primary care, specialists, as well as patient education and psychotherapy. Additional studies assessing long-term outcomes for treatments are needed to better understand and treat this disorder.

### References