A Burning Question

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Case presentation

"My mouth feels like all I've eaten is hot chili pepper!", a 54 y/o woman worriedly commented during a routine visit. The dysesthesia affected her lips, bilateral oral commissure, tip and borders of the tongue, and soft palate. It had been present for 3 weeks. Associated with xerostomia without changes in appearance of her eyes, lacrimation, itchiness, numbness, or dysgeusia. Strong psychological stress preceded her symptom. Her medical history was significant for well-controlled T2DM. On physical examination, her mouth and oral cavity were normal.

Workup

A complete blood count and chemistry panel were normal. SARS-Cov-2 RNA PCR was negative. Ferritin, vitamin B12, B9, and B6, Zinc, ESR, HCV ab, HBsAg, HIV, RPR, Antinuclear Antibody, and Sjogren's antibodies were normal.

Brain MRI didn't show any intracranial pathology.

Differential diagnosis

The burning mouth sensation is commonly seen in aphthous/contact stomatitis. Other differential diagnoses include herpes/post-herpetic neuralgia, candidiasis, Sjogren's syndrome, anemia, nutritional deficiencies, and intracranial processes (multiple sclerosis, infection, neoplasia). Our patient didn't have any of the above and, even more puzzling, her symptom didn't dissipate after a few weeks but persisted for 6 months. Now the burning question is, what is the diagnosis?

Treatment

Initially, she was treated with topical Lidocaine and Benzocaine mucosal gel without improvement. After establishing the diagnosis, Gabapentin and psychotherapy were started. At her 6-month follow-up her symptoms were improved but not completely resolved.

Burning mouth syndrome

Burning mouth syndrome (BMS) is a chronic burning sensation in a clinically normal oral mucosa. Its prevalence is 0.11%[1] and higher amongst middle-aged females.

Clinical subtypes	Diagnostic criteria	Treatment
- Type 1 associated with T2DM - Type 2 associated with psychological disorders - Type 3 associated with allergic reactions	<u>Fundamental criteria:</u> 1. Daily and deep burning sensation of the oral mucosa 2. Duration 4-6 months 3. Constant/increasing intensity 4. Not worsened by oral intake 5. Not interfering with sleep <u>Additional criteria:</u> dysgeusia, xerostomia, chemosensory alterations, and psychopathologic alterations[2].	Benzodiazepines, tricyclic antidepressants, anticonvulsants (gabapentin), and selective serotonin reuptake inhibitors. If found to be deficient, vitamins, zinc or iron should be supplemented. Psychotherapy is necessary if related to psychiatric disorders.

Prognosis

In a retrospective study, only 3% of patients with BMS had remission after 5 years, and 49% had no improvement after 18 months[3]

Conclusion

BMS is challenging to diagnose and treat. The internist should be aware of this entity and get work up accordingly including vitamin and minerals levels, and rule out infectious and neurologic conditions. With the appropriate intervention it can significantly improve however, remission is rare.

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