

# Herpetic glossitis due to therapies related to COVID-19

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## DESCRIPTION

A 90-year-old female patient with diabetes mellitus presented with newly developed anorexia and oral pain during hospitalisation. She was admitted for severe COVID-19 about 6 weeks earlier. For COVID-19 treatment, she received oral dexamethasone 6 mg/day for 10 days. One week after the completion of dexamethasone therapy, oral prednisolone 40 mg was administered for organising pneumonia associated with COVID-19. After prednisolone was tapered to 20 mg/day, she began experiencing oral pain. Physical examination revealed multiple, crater-like ulcers with white, raised borders containing small, tense vesicles on the dorsum of the tongue (figure 1). PCR using a lingual swab was positive for herpes simplex virus type 1 (HSV-1) DNA and a lingual swab culture was negative for *Candida* spp. Based on these findings, herpetic glossitis was diagnosed. Oral valacyclovir was begun, after which her oral lesions healed completely. Her anorexia also improved after the 5-day course of valacyclovir.

Herpetic glossitis is a rare form of oral HSV-1 infection and is an important differential diagnosis of anorexia, especially in immunocompromised patients. The clinical manifestation of herpetic glossitis is extremely polymorphous and includes crater-like ulcers as in this case, diffuse erythema, pseudotumoral plaques or nodules and linear or cross-hatched fissures.<sup>1 2</sup> Although the diagnosis can usually be made clinically based on characteristic findings and patient history,<sup>3</sup> virological confirmation should be made because the diverse manifestations may mimic lesions with other aetiologies. Most HSV-1 infections respond well to antiviral agents, including acyclovir, valacyclovir and famciclovir, but prompt diagnosis and treatment are essential because early antiviral therapy may facilitate faster healing.

While oral lesions associated with COVID-19 have been recognised and discussed, the relevant data, derived mainly from case reports, are still insufficient.<sup>4 5</sup> The aetiology of oral lesions associated with COVID-19 remains uncertain and is thought to be multifactorial.<sup>4</sup> Several reports have shown that HSV infections manifesting as oral lesions may be associated with COVID-19, although the precise manner of HSV involvement is unknown.<sup>5</sup> In our case, it was obvious that the herpetic glossitis developed as a result of immunosuppression due to prolonged steroid therapy, whereas judging from its clinical course and timing of onset, COVID-19 was unlikely to have contributed directly to the oral symptoms.



**Figure 1** Multiple, crater-like ulcers with raised borders containing small vesicles on the tongue.

A previous report suggested that COVID-19 may be a risk factor of HSV reactivation.<sup>6</sup> Fatalities caused by HSV-1 reactivation associated with COVID-19 and its related therapies have also been reported.<sup>7</sup> These findings, as well as the increasing use of glucocorticoids and other immunosuppressive agents in COVID-19 therapy, may increase cases of reactivated herpetic infection, including herpetic glossitis. Moreover, clinicians should bear in mind that elderly patients may sometimes have difficulty describing oral symptoms accurately or be reluctant to remove their mask, thereby causing oral lesions to be overlooked.

In conclusion, herpetic glossitis is an important, potential complication of COVID-19 therapy. In the era of the COVID-19 pandemic, the need for an oral examination may easily be overlooked. The

## Learning points

- ▶ COVID-19 and its associated therapies can lead to various glossal symptoms, such as herpetic glossitis, which is an important differential diagnosis of anorexia and is treatable.
- ▶ PCR for herpes simplex virus DNA using a lingual swab is an easy, non-invasive method of definitively diagnosing herpetic glossitis.
- ▶ Careful oral examination is still important when managing patients with COVID-19, especially because oral findings are at risk of being overlooked in the era of the COVID-19 pandemic.



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present case underscores the continuing need for a careful physical examination.

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