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## Letter to the Editor

### Tongue and floor of mouth swelling: a potential rare manifestation of COVID-19

Sir,

It is now approaching 12 months since the WHO declared coronavirus disease 2019 (COVID-19) a global pandemic.<sup>1</sup> Aside from the core signs and symptoms, an increasing number of less common presentations have been reported.<sup>2</sup> A number of possible oral manifestations have also been proposed.<sup>3</sup> We would like to present a possible association between COVID-19 and tongue swelling that has not previously been reported.

A 53-year-old male presented to a peripheral hospital with a one day history of tongue and floor of mouth swelling. There was no history of dental pain, trauma, or salivary symptoms. He denied any core COVID-19 symptoms. A CT scan was performed and reported floor of mouth and neck oedema concerning for Ludwig's angina. The patient was transferred to our unit for assessment. He had soft bilateral neck swelling and an oedematous raised floor of mouth, but no dental source of infection. He was admitted for intravenous steroid therapy and subsequent PCR testing confirmed COVID-19. He improved with treatment and was discharged with appropriate advice after 24 hours.

The second patient was a 22-year-old male who presented complaining of a one day history of tongue pain and swelling. Examination revealed moderate tongue oedema and mild voice change. Flexible nasendoscopy showed no acute airway compromise but oedema of the nasal mucosa and tongue base. A CT was performed which demonstrated generalised tongue oedema, particularly affecting the base of tongue. Lung changes consistent with COVID-19 pneumonia were also reported. While awaiting the report the patient became uncooperative and discharged himself against medical advice. No confirmatory PCR test was performed or treatment commenced.

In both of these cases, oedema of the tongue or floor of mouth with associated symptoms, was present and concern-

ing for developing airway compromise. No dental or other maxillofacial cause was identified in either case. Although correlation does not imply causation, we feel both of these cases may represent a rare presentation of COVID-19. The angiotensin converting enzyme 2 receptor is an entry site for the SARS-CoV-2 virus and organs with these receptors may be particularly susceptible to an inflammatory response.<sup>3</sup> The epithelial cells of the tongue have recently been shown to have high receptor numbers, suggesting a possible mechanism for this presentation.<sup>4</sup> We feel these cases may represent a rare manifestation of COVID-19 which should be borne in mind in patients presenting with oedema of the tongue or floor of mouth, especially in the absence of a clear source.

### Conflict of interest

We have no conflicts of interest.

### Ethics statement/confirmation of patients' permission

Ethics approval not required. No identifying details.

### References

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