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## Letter To The Editor

# Comment on: Oral Manifestation of COVID-19 as an inaugural symptom?

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We have read with great interest the correspondence of Chaux-Bodard *et al.* on the potential prognostic utility of oral ulcers for coronavirus disease (COVID-19) [1]. It is inevitable that amidst the outbreak of communicable diseases, epidemiologic researchers and clinical practitioners work conjointly to establish diagnostic features for early screening. In addition to the fact that COVID-19 shares a large set of non-specific symptoms with other respiratory diseases, it can show no clinical symptoms in 5–80% of laboratory-confirmed cases. Therefore, using typical respiratory symptoms may yield suboptimal diagnosis suggesting the need to ascertain adjacent clinical symptoms.

We have adopted four parameters to look for what can be an inaugural symptom inside the oral cavity; onset, prevalence, prognosis, and etiology. As oral ulcers may share a common etiological course with dermatologic manifestations [1], a recent literature review revealed that the majority of cutaneous symptoms appeared after hospitalization (87.5%), while the rest emerged at the same time with respiratory symptoms (12.5%). There is no record of cutaneous symptoms before the onset of respiratory symptoms [2]. Prevalence of cutaneous symptoms varied among the published studies, it is worthy of note that general epidemiologic studies reported a lower prevalence of around 0.2%, while the cohort studies conducted by dermatologists showed a higher prevalence of 20.4% [2]. This great variation can be attributed to specialty bias. Etiology of cutaneous symptoms can be related to the virus itself, medical complications of critically ill patients, co-infection by other respiratory infections, or adverse effects of supportive medications; reverse transcriptase-polymerase chain reaction (RT-PCR) results of skin samples were negative for SARS-COV-2. It can be concluded that cutaneous symptoms are not a direct effect of the infection but occur as an immune response. Dermatologic researchers suggested that cutaneous symptoms cannot predict disease severity [2].

There is a strong association between gustatory impairment and COVID-19 infection. Contrary to cutaneous symptoms, a high prevalence of amblygeustia (diminished sense of taste) is consistently detected in 15–50% of laboratory-confirmed cases [3]. In addition, amblygeustia tends to occur at an early stage of the infection while patients are asymptomatic-to-mild; 91% of patients with amblygeustia reported it before hospitalization [4]. This can be explained by the high expression of ACE2 in oral mucosa and taste cells as an etiological factor of amblygeustia [4]. Interestingly, Yan *et al.* hypothesized that mild cases are attributed to nasal-centric viral spread that results in a high percentage of anosmia and amblygeustia occurrence, while severe cases are attributed to a more pulmonary-centric viral infection that leads to less experience of sensory malfunction [5]. This hypothesis can be supported by the findings of Lee *et al.* that most of amblygeustia patients were younger individuals who are predicted to have less fatality rates [3].

To conclude, dental practice can significantly benefit from identifying oral symptoms of COVID-19 with high prognostic potential; therefore, we recommend amblygeustia and the combination of amblygeustia and xerostomia as screening criteria for admission protocols during the new normal period. Compared to oral mucosal lesions, amblygeustia has higher prevalence suggesting a stronger correlation with earlier onset of COVID-19 infection, and better prognostic capacity for infection severity.

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## Conflict of interest

The authors declare no conflict of interest.

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