

Oral Manifestations in COVID-19: a Missed Diagnostic Clue or a Mispresented Secondary Complication

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Article Type:

Letter to Editor

Article History:

Received: 2 Jun 2021

Revised: 18 Jun 2021

Accepted: 1 Jul 2021

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DOI: [10.29252/jorjanibiomedj.9.3.1](https://doi.org/10.29252/jorjanibiomedj.9.3.1)

Abstract

According to recent studies, oral lesions associated with COVID-19, manifests in various forms which may be as inaugural symptoms for the onset of the disease. However, further investigations are needed to confirm their probable characteristic role in diagnosis of COVID-19. It should be also noted that any oral manifestation in COVID-19 must be considered to avoid neglecting oral changes with more lasting destructive effects such as necrotizing periodontal lesions.

Keywords: COVID-19 [[MeSH](#)], SARS-CoV-2 [[MeSH](#)], Oral Health [[MeSH](#)]

Highlights

Various oral lesions have been reported in patients with COVID-19. Dentists should be aware of these manifestations in order to be able to diagnose this disease and then manage oral secondary complications accordingly.

Statement

The recent coronavirus disease 2019 (COVID-19) is a global threat to world health which presents variable outcomes, ranging from mild flu-like symptoms to a severe acute respiratory syndrome (1). The most common clinical manifestations of COVID-19 are headache, sore throat, fever, hyposmia, hypohypoguesia, dyspnea and diarrhea (2, 3).

Cutaneous lesions related to COVID-19 also have been reported by dermatologists (4), including vasculitis, rash, urticaria, Varicella-like lesions and acro-ischemia (2, 5).

There have been some case reports about oral manifestations but there is still a hesitation whether these manifestations could be a typical direct outcome of viral infection or a result of other opportunistic infections or as a side-effect of treatments. For example, some drugs or intubation procedure may lead to worsening of oral health condition (1, 6). The effect of emotional stress during the period of COVID-19 should also be noted, as it can trigger herpes virus complex which may cause oral manifestations (7, 8).

Our knowledge about oral changes in COVID-19 is low, due to hard accessibility to hospitalized patients (9) or being neglected because of poor overall health condition of patients.

There is a controversy among the results of the studies about the incidence of oral manifestations in Coronavirus-positive patients. Some papers claimed that oral lesions are not manifestation of COVID-19 (7, 10), however other papers showed this relationship (3, 4). Orofacial symptoms associated with COVID-19, mentioned in previous studies, were disgusia, candidiasis, petechia (1), painful aphtus (5) traumatic ulcers,

HSV-1-like lesions, geographic tongue, thrush-like ulcers, undefined ulcers which interfere with chewing, swallowing or speaking and acute parotitis (1, 11). If this relationship is not confirmed, the practitioners can work without worry and the patients will not have to be afraid about getting COVID-19 at the first occurrence of any oral manifestations (7) but if this association between oral symptoms and coronavirus is proven, then the main question is: why are oral manifestations important in COVID-19? One of the noteworthy points about oral manifestation of COVID-19 is their probable priority to other symptoms of disease in some patients (4) as in a case-report by Chaux-bodard, an irregular oral tongue ulcer was suggested as an initial feature of this disease in a so far clinically healthy case (4). Thus a precise oral examination may be a clue to the diagnosis of COVID-19 cases that are still systemically asymptomatic. This highlights the importance of including dentists in the multi-professional team to improve oral health in COVID-19 patients. Another important point to note is the possibility of the persistence of oral changes even after the recovery of COVID-19. For example, A study by Patal et al, predicted an elevation in the prevalence of necrotizing periodontal lesions in confirmed COVID -19 patients. They reported submandibular lymphadenopathy, severe halitosis and several necrotic lesions in both jaws and spontaneous bleeding without any provocation (10). Another study by Brandao et al also reported eight cases of COVID-19 infection with oral necrotic lesions in lip, palate and oropharynx, appeared in early course of disease, just a few days after disgusia (11). In this regard, some previous studies had also reported necrotizing lesions in other parts of the body such as skin necrotic changes or digital gangrene (12, 13) which may affects the quality of life of patients in the future. So, the oral lesions in COVID-19 cases should not be considered insignificant and their investigation and treatment is better to be included in the comprehensive treatment protocol of these patients to prevent further complications.

Conclusion

Patients with COVID-19 manifest certain oral lesions that may help clinicians recognize suspected cases. COVID-19 may also be associated with severe or lasting changes which require special attention during the management of these patients.

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How to cite:

Rashidi maybodi F, Vaziri F. Oral Manifestations in COVID-19: a Missed Diagnostic Clue or a Mispresented Secondary Complication. *Jorjani Biomedicine Journal*. 2021; 9(3): 1-3.