

Oral manifestations in coronavirus disease 2019 (COVID-19)

Martín Carreras-Presas, Amaro Sánchez, López-Sánchez, Jané-Salas, and Somacarrera Pérez (2020) reported three cases in May in Oral Diseases that they suggested was the first case report describing of a COVID-19 patient with oral manifestations including oral pain, desquamative gingivitis, ulcers, and blisters. Galván Casas et al. (2020) provided a description in April in the British Journal of Dermatology of the cutaneous manifestations of COVID-19 in an impressive 375 case series, and with that, they had documented for the first time the oral manifestations of the disease. The report includes an atlas of these manifestations as a downloadable supplement that includes apparently 150 different cases and among those, three cases with intra-oral manifestations that vary from ulcers in the palatal mucosa, to localized erythema in the palate and the margins of gingiva.

It is not surprising COVID-19 has oral manifestations, since many other viral infections also have similar presentations (Clarkson, Mashkoo, & Abdulateef, 2017; Nedwick-Castro & Vieira, 2012). It will be interesting to determine in the near future how frequent those manifestations are in individuals presenting symptoms in contrast to infected asymptomatic. We evaluated a 32-year-old White male that had shortness of breath associated with coughing for one-week early March and three weeks later developed pseudo-chilblain. He keeps good oral hygiene and had no prior signs of gingival inflammation, and although reporting higher levels of stress and less rigorous oral hygiene during the episode, he did not show any signs of gingival bleeding or inflammation. Therefore, we hypothesize that mild cases of COVID-19 may not show any oral manifestations. For the severe cases, in which a persistent inflammatory status appears to act as a trigger for the coagulation cascade and is associated with increased levels of fibrinogen degradation products (e.g., D-dimer) (Cao & Li, 2020), we believe that prior underlying untreated moderate or severe periodontitis may worsen COVID-19. Conversely, periodontal therapy in individuals with initial COVID-19 symptoms may reduce the risk of the condition to become severe by reducing the amount of D-dimer in the plasma, which is what we see when patients with periodontitis are treated (Dikshit, 2015).

KEYWORDS

chilblain, periodontitis, pneumonia, SARS, SARS-CoV-2, virus

ACKNOWLEDGEMENTS

There are no sources of funding to report. The author contributed to conception, design, data acquisition, and interpretation, drafted and critically revised the manuscript.

CONFLICT OF INTEREST

The author has no conflict of interest to report.

AUTHOR CONTRIBUTION

Alexandre Vieira: Conceptualization; Data curation; Formal analysis; Funding acquisition; Investigation; Methodology; Project administration; Resources; Writing-original draft.

Alexandre R. Vieira 

University of Pittsburgh, Pittsburgh, PA, USA

Correspondence

Alexandre R. Vieira, University of Pittsburgh, Pittsburgh, PA.

Email: arv11@pitt.edu

ORCID

Alexandre R. Vieira  <https://orcid.org/0000-0003-3392-6881>

REFERENCES

- Cao, W., & Li, T. (2020). COVID-19: Towards understanding of pathogenesis. *Cell Research*, 30(5), 367–369. <https://doi.org/10.1038/s41422-020-0327-4>
- Clarkson, E., Mashkoo, F., & Abdulateef, S. (2017). Oral viral infections: Diagnosis and management. *Dental Clinics of North America*, 61(2), 351–363. <https://doi.org/10.1016/j.cden.2016.12.005>
- Dikshit, S. (2015). Fibrinogen degradation products and periodontitis: Deciphering the connection. *Journal of Clinical Diagnosis Research*, 9(12), ZC10–ZC12. <https://doi.org/10.7860/JCDR/2015/14729.6922>
- Galván Casas, C., Català, A., Carretero Hernández, G., Rodríguez-Jiménez, P., Fernández Nieto, D., Rodríguez-Villa Lario, A., ... García-Doval, I. (2020). Classification of the cutaneous manifestations of COVID-19: a rapid prospective nationwide consensus study in Spain with 375 cases. *British Journal of Dermatology*. <https://doi.org/10.1111/bjd.19163>
- Martín Carreras-Presas, C., Amaro Sánchez, J., López-Sánchez, A. F., Jané-Salas, E., & Somacarrera Pérez, M. L. (2020). Oral vesiculobullous lesions associated with SARS-CoV-2 infection. *Oral Diseases*. <https://doi.org/10.1111/odi.13382>
- Nedwick-Castro, K., & Vieira, A. R. (2012). Failure to control caries in an AIDS-affected individual: A case report. *Case Reports in Dentistry*, 2012, 643436.