Received: 14 May 2020 | Accepted: 9 June 2020

DOI: 10.1111/odi.13498

ORAL DISEASES Leading in Oral, Maxillofacial, Head & Neck Medicine WILEY

LETTER TO THE EDITOR

SARS-CoV-2 and oral ulcers: A causative agent or a predisposing factor?

Dear Editor,

Earlier reports on COVID-19 have reported certain orofacial manifestations like taste loss and salivary gland infection (Dar Odeh et al., 2020). More recently, two studies from Spain and France reported oral ulcerative lesions in COVID-19 patients (Carreras-Presas et al., 2020; Chaux-Bodard, Deneuve, & Desoutter, 2020). The study from Spain included three patients. The first two cases (males) were suspected cases of COVID-19 as testing was not done for them. Intraorally, they had oral ulcers affecting the hard palate unilaterally in the anatomic area innervated by greater palatine nerve. The shape and pattern of ulcers suggest a viral etiology. The third case was a woman who was a confirmed case of COVID-19, and she had typical manifestations of COVID-19. Her treatment consisted of immunosuppressants, antibiotics, and antivirals. Approximately one week after recovery from COVID-19, she developed oral ulcers and "desquamative gingivitis" as the authors described it.

While the report above suggested to an association between COVID-19 and the oral symptoms, these conclusions should be interpreted with caution, and the reported cases should be analyzed carefully so as not to mislead the dental or medical community. Only one case out of three was actually diagnosed with COVID-19. The other two cases were neither diagnosed with COVID-19, nor had any of the recognized symptoms of the disease. Being cohabitants with COVID-19 patients does not necessarily confirm infection or predict the disease outcomes. Moreover, pattern and shape of ulcers in the first two cases were very similar to introral herpetic infection which could be caused by the herpes family of viruses. The unilateral distribution in both patients affecting a characteristic anatomic area implicates varicella zoster virus, or less probably one of the herpes simplex viruses. In the third case, oral ulcers affected the patient after recovery, and this took place in association with skin lesions that necessitated antifungal therapy suggesting that these skin lesions were fungal in etiology. Prior to the appearance of oral ulcers, the patient received immunsuppressive therapy. Although "desquamative gingivitis" was described in this patient, there was no photograph for such lesion, so it is hard to judge whether this is actually a desquamative or plague-induced gingivitis. Within this context, it is important to highlight that no tests were done for these patients to exclude the already recognized viral infections affecting the orofacial region, and oral examination was performed only for the female patient.

An earlier report from France described an ulcerative lesion of the tongue that appeared in association with erythematous skin lesions in a middle-aged woman who was positive for COVID-19. (Chaux-Bodard et al., 2020) Unfortunately, this report did not give a complete account of the patient's medical condition and whether she had any symptoms related to COVID-19. It also did not explain whether the patient was on any medications.

The genome of SARS-CoV-2 has been detected in saliva in the majority of patients with this disease (Kotfis & Skonieczna-Żydecka, 2020), and in some cases, SARS-CoV-2 was only detected in saliva, with no evidence for its presence in the nasopharynx. (To et al., 2020) However, we should be cautious when associating COVID-19 with oral ulcers as there are many viruses that could affect the oral cavity by ulcers. Moreover, many medications are implicated in oral ulcers. COVID-19 and its treatment are expected to compromise immunity and increase susceptibility to a wide range of opportunistic fungal and viral infections. Moreover, emotional stress associated with home quarantine, lockdown, and infection of beloved friends and family members is also expected to jeopardize health and complicate the clinical picture.

CONFLICT OF INTEREST

Authors declare that there is no conflict of interest.

AUTHOR CONTRIBUTION

Shaden Abu-Hammad: Resources; Writing-original draft. **Najla Dar-Odeh:** Supervision; Writing-original draft. **Osama Abu Hammad:** Supervision; Writing-review & editing.

Shaden Abu-Hammad
Najla Dar-Odeh
Osama Abu-Hammad

School of Dentistry, University of Jordan, Amman, Jordan

Correspondence
Najla Dar-Odeh, School of Dentistry, University of Jordan, Amman, Jordan.
Email: Najla_dar_odeh@yahoo.com

ORCID

Najla Dar-Odeh https://orcid.org/0000-0002-6577-2373

REFERENCES

Chaux-Bodard, A.-G., Deneuve, S., & Desoutter, A. (2020). Oral manifestation of Covid-19 as an inaugural symptom? *Journal of Oral Medicine and Oral Surgery*, *26*(2), 18. https://doi.org/10.1051/mbcb/2020011

Dar Odeh, N., Babkair, H., Abu-Hammad, S., Borzangy, S., Abu-Hammad, A., & Abu-Hammad, O., (2020). COVID-19: Present and future challenges for dental practice. *International Journal of Environmental Research and Public Health*, *17*, 3151. https://doi.org/10.3390/ijerph17093151

Kotfis, K., & Skonieczna-Żydecka, K. (2020). COVID-19: Gastrointestinal symptoms and potential sources of 2019-nCoV transmission. *Anaesthesiology Intensive Therapy*, *52*(1), 1–2. https://doi.org/10.5114/ait.2020.93867

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*, 1–3. https://doi.org/10.1111/odi.13382

To, K.- K.-W., Tsang, O.- T.-Y., Chik-Yan Yip, C., Chan, K.-H., Wu, T.-C., Chan, J. M. C., … Yuen, K.-Y. (2020). Consistent detection of 2019 novel coronavirus in saliva. *Clinical Infectious Diseases*, *70*, 1–3. https://doi.org/10.1093/cid/ciaa149