

SARS-CoV-2 oral-associated lesions: Discussion of elicited response

Dear Editor,

This pandemic phenomenon has generated a large number of publications (May 19 in PubMed 2,267), all of them aimed a better knowledge of its microbiological and serological characteristics, clinical expressions, and complications, trying to find those situations that could be more serious indicators. The search for these characteristics does not escape the oral sphere. Our group had the opportunity to find the cases presented, and the only thing we tried to do was to shed some light on the fact that oral lesions may be part of the syndromic complex that causes COVID-19. We were extremely careful with our words when we reported lesions associated with COVID-19 disease, and not due to it (Al-Khatib, 2020; Lombardo & Pagnoncellia, 2020; Ponce & Tjioe, 2020; Rocha et al., 2020).

Every day, we see that alterations that had been recorded as casual (gastrointestinal, cardiac, renal, encephalic disorders, coagulation) become part of the manifestations of this pathogen and its syndromic picture because it is a new infection. And we are learning from it as it evolves and shows its behavior (Jin et al., 2020; Ng Kee Kwong, Mehta, Shukla, & Mehta, 2020; Pilotto et al., 2020).

Some authors mention in their letters that our report was not the first COVID-19 patient with intraoral manifestations. The fact of the existence of a previous publication lies in the temporality. When we submitted the article, documents that were published a few days before ours were not accessible, or even visible in PubMed; thus, we were not able to include them in our references (Rocha et al., 2020; Vieira, 2020).

We would like to congratulate a group of Spanish dermatologists that collected 375 COVID-19 patients with cutaneous manifestations (Galvan Casas et al., 2020) and also Chaux-Bodard et al. for having published the first report of a patient with oral and cutaneous manifestations just 5 days before our article was published (Chaux-Bodard, Deneuve, & Desoutter, 2020).

Other authors congratulate us on having published our article. We would like to especially thank Dr. Rocha and Dr. Bayrakdar for their contributions and comments to our article (Bayrakdar, Bayrakdar, & Güneri, 2020; Rocha et al., 2020).

The purpose of this letter to the editor is to respond to several letters to the editor that we have received after the publication of our article: Martín Carreras-Presas, C., Amaro Sánchez, J., López-Sánchez, A.F., Jané-Salas, E. and Somacarrera Pérez, M.L. (2020), Oral vesiculobullous lesions associated with SARS-CoV-2 infection. *Oral Dis.* doi: <https://doi.org/10.1111/odi.13382>

In response to Dr. Ponce and Dr. Abu-Hammad, the diagnosis of COVID-19 is difficult in some cases since they may resemble other clinical features commonly seen in other viral processes, but the suspected COVID-19 cases that we reported were clinically compatible with the findings in the literature about SARS-CoV-2 infection. Besides, we have not found any article reporting herpes simplex virus (HSV) and concomitant anosmia or dysgeusia, as seen in patient number 1. We completely agree with Dr. Ponce that the very first contact with HSV may be subclinical, but in our opinion, it is such a big coincidence that the recurrency concurs with anosmia and dysgeusia at the same time, especially during this pandemic period. Patient number 2 was isolated with his wife that had been diagnosed with SARS-CoV-2 infection, with similar lesions that patient number 1 has. In his opinion, these lesions resemble an intraoral herpes zoster (VZV). In our opinion, lesions in both patients look alike. Dr. Ponce believes that both patients were immunosuppressed and thus got a recurrency of either HSV or VZV. Literature about intraoral manifestations of SARS-CoV-2 infection is scarce. The appearance of these lesions is coherent with other viral exanthematic lesions summarized by Scully and Samaranayake (2016) and also, in our article, we stated that we could not rule out that the lesions had been triggered by emotional distress or immunosuppression (Abu-Hammad, Dar-Odeh, & Abu Hammad, 2020; Ponce & Tjioe, 2020; Rocha et al., 2020).

Cytokine release syndrome (CRS), which is seen in COVID-19 patients, presents in association with immune dysregulation and tissue damages, especially at the oral and nasal mucosa (Diamanti, Rosado, Pioli, Sesti, & Laganà, 2020). In normal conditions, we would have asked for a serology IgG and IgM not only for SARS-CoV-2 but also for HSV and VZV, but we still are in the lockdown period in Spain and we were not able to perform any confirmatory complementary tests in our dental office. Since we are aware of it, our short communication does not attempt to be diagnostic but descriptive.

In Dr. Al-Khatib's opinion, patients 1 and 2, had a recurrent herpetic infection triggered by fear and stress and that it is not likely that lesions on patient number 3 are related to SARS-CoV-2 infection cause the patient had been diagnosed 1 month ago (Al-Khatib, 2020).

We mentioned that it is not possible to establish whether these lesions were triggered by emotional stress, or whether they are somehow related to the pathogenesis of SARS-CoV-2 infection (Chida & Mao, 2009; Suzich and Clife, 2018), and we must

disagree with his asseveration, since that patient is still PCR + for SARS-CoV-2.

Recently, Ansari et al. reported 2 more cases of COVID-19 patients with intraoral ulcers. They performed histopathological examination and ruled out herpes simplex infection by serological analysis (Ansari, Gheitani, Heidari, & Heidari, 2020).

Erythema multiforme was one of our differential diagnoses for patient number 3 either secondary to the medication or secondary to the viral infection itself. The biopsy that was taken at the hospital by the dermatologists confirmed the viral origin of the lesions since they found dilated vessels with neutrophils, spongiosis, and absence of eosinophils, which oriented the final diagnosis to be viral dermatitis as mentioned in our communication (Jimenez-Cauhe et al., 2020).

Finding multiple blisters as a manifestation of a traumatic injury in the oral cavity is very unlikely.

We would like to thank Dr. Ponce for the table that summarizes all the viral processes reported in the literature to date. We appreciate your contribution which enriches scientific knowledge about oral manifestations of viral diseases (Ponce & Tjioe, 2020).

Since our patients were diagnosed by teleconference, we agree with Dr. Bayrakdar that telemedicine could be useful for managing dental emergencies and for minimizing the contact between the patients and the clinicians in COVID-19 pandemic term (Bayrakdar et al., 2020).

In response to Dr. Lombardo and Pagnoncellia, Dr. Vieira, and Dr. Rocha, our publication does not want to be opportunistic, and it pretends to be a motivating document for other researchers, among which it would be excellent to have their contribution to comment, and if it was the case to contradict those findings we humbly found and published in our article (Lombardo & Pagnoncellia, 2020; Rocha et al., 2020; Vieira, 2020).

Lastly, Dr. Patel and Wolley reported a necrotizing periodontal disease in a 35-year-old female patient suspected of having COVID-19 as a response to our article. They believe there will be a rise in the prevalence of this type of acute periodontal lesions in COVID-19-confirmed patients (Patel & Woolley, 2020).

In this line, Dr. Vieira believes that severe cases of COVID-19 previously diagnosed with underlying untreated moderate or severe periodontitis may worsen COVID-19, while he thinks that mild cases of COVID-19 may not show any oral manifestations (Vieira, 2020).

We understand that the possible debate is open. There is a lack of literature about intraoral manifestations of SARS-CoV-2 infection. As we stated before, more studies need to be carried out to understand the pathogenesis of COVID-19 and its oral manifestations. We encourage all healthcare providers to perform systematic intraoral examination to every suspected patient of COVID-19 to a better understanding of the disease.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interests.

AUTHOR CONTRIBUTION

Carmen Martín Carreras-Presas: Writing-original draft. **Juan Amaro Sánchez:** Writing-review & editing. **Antonio Francisco López Sánchez:** Writing-review & editing. **Enric Jané-Salas:** Writing-review & editing. **María Luisa Somacarrera Pérez:** Supervision.

PEER REVIEW

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