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## LETTER TO THE EDITOR

## Reply: Insights and challenges in the management of oral lesions in patients with COVID-19



To the Editor:

We thank Professors Joseph and Prasanth for their comments in their Letter to the Editor titled “Is Photodynamic Therapy a Viable Antiviral Weapon Against COVID-19 in Dentistry?”

The suggestion regarding the use of photodynamic therapy (PDT) to assist in healing oral lesions in coronavirus disease 2019 (COVID-19)-infected patients has merit. However, it has not yet been investigated. Oral lesions in COVID-19 are currently considered to be uncommon, non-specific,<sup>1</sup> and mostly characterized by acute onset secondary to severe acute respiratory syndrome coronavirus 2 infection outcomes.<sup>2</sup> In our case series we did not have the opportunity to culture the lesions or show the presence/transcriptional activity of the virus in situ. As stated in our article, we cannot confirm whether the manifestations were directly related to the virus or other opportunistic agents due to systemic illness affecting the patients.<sup>3</sup> This is being planned for future studies.

Our intent was to demonstrate that COVID-19-infected individuals may develop a variety of oral lesions and, because of the pain associated with the lesions, we aimed to provide support by controlling pain and stimulating wound healing. The use of PDT in preventive protocols must be studied. One would have to include the entire oral cavity because it cannot be predicted where lesions will develop. Clinical interventions are used once lesions are established on the mucosa to alleviate pain and stimulate healing. Nevertheless, when oral cavity lesions develop in the context of COVID-19 they tend to affect multiple oral mucosa sites of patients under mechanical ventilation with an endotracheal tube,<sup>1,3</sup> which in turn will pose additional technical challenges for PDT bedside protocols.

“Disinfecting the oral cavity” of patients with COVID-19, as suggested by our colleagues, is currently being tested with the use of mouthrinses that might have antiviral action. New studies using PDT in this context is necessary. For instance, a recent systematic review was unable to confirm the effectiveness of PDT in the treatment of herpetic lesions (cold sores),<sup>4</sup> which is a much less complex disease entity. We suggest that, according to our

initial experience acquired in the management of the reported cases, and with the lack of robust literature, photobiomodulation therapy or other adjuvant treatments should only be employed in patients with COVID-19 with symptomatic oral ulcerative lesions that do not respond to conventional therapy. That is what we did.<sup>3</sup>

Oral health management has been deeply impacted during the current pandemic because of the high risk of COVID-19 transmission between dentists and patients. Hence, it is important to re-design recommendations to oral medicine specialists and dentists working in the hospital setting on the safe management of oral manifestations in severe acute respiratory syndrome coronavirus 2-infected individuals. Protocols must be swift and include safety measures to decrease the risk of transmission by reducing the time of contact with the saliva of contaminated patients.<sup>5</sup> We recommend that Professors Joseph and Prasanth present suggestions to the readers on how they would run the PDT protocol in the abovementioned challenging scenario, the type of technology indicated, parameters and time of application, and whether or not they have clinical experience and results to share. We still have much to learn about the oral manifestations observed in COVID-19-infected individuals and we welcome any type of information that would add to our current knowledge.

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