

LETTER TO THE EDITOR

Severe acute respiratory syndrome coronavirus 2 and herpesvirus in oral lesions in patients with severe coronavirus disease 2019: Viral interaction?

Dear Editor,

Oral lesions have been described in coronavirus disease 2019 (COVID-19) patients, especially in those with the severe form of the disease, namely showing severe acute respiratory syndrome and requiring intensive care unit hospitalization. Some of these lesions are

suggestive of viral infection.¹⁻⁴ We analyzed 189 medical records of COVID-19 patients and found 18 cases (9.5%) with oral lesions suggestive of viral etiology. In 11 patients (11/18, 61.1%), an reverse transcription polymerase chain reaction viral panel of the lesion was performed. All of the tested lesions were positive for herpesviruses;

(a)

Oral lesions with suspicion of viral etiology (n=18)	
Viral panel for oral lesions swab – n (%)	
Not performed (only therapeutic test)	7 (38.9)
Performed	11 (61.1)
Positive for HHV1	11 (61.1)
Positive for HHV2	2 (18.2)
Positive for EBV	7 (63.6)
Positive for CMV	1 (9.1)
Positive for HHV6	1 (9.1)
Positive for HHV7	6 (54.5)
Positive for SARS-CoV-2	3 (27.3)
Virus association – n (%)	
HHV1 plus one herpesvirus	3 (27.3)
HHV1 plus two or more herpesvirus	7 (63.6)
HHV1 plus SARS-CoV-2 and other herpesviruses	3 (27.3)

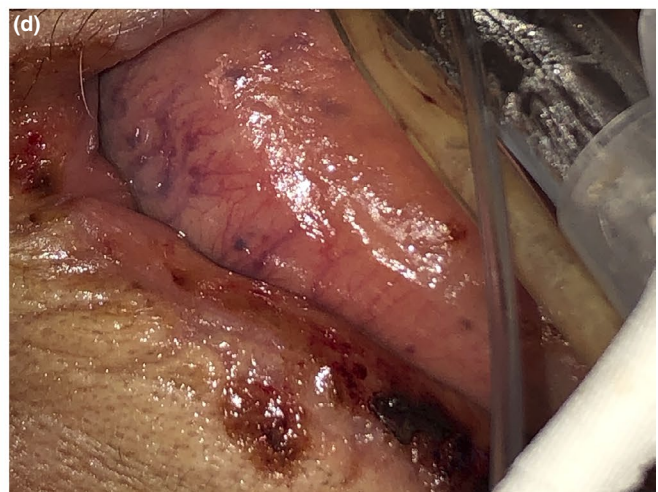


FIGURE 1 (a) Viral positivity in samples collected by oral lesion swabs. (b) Multiple ulcerations in the lip mucosa and vestibule that became hemorrhagic as the patient exhibited clinical worsening. (c) Multiple isolated or coalescent ulcerations, covered by a fibrinoid membrane and with granulation tissue in the background. These lesions were positive for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). (d) Oral ulceration positive for SARS-CoV-2 with spontaneous bleeding and hemorrhagic or fibrinoid crust in the lip commissure, mucosa, and skin. Petechias and varicose small veins in the lateral border of the tongue were seen concomitantly with oral viral ulcerations

three patients (3 /11, 27.3%) showed oral lesions also positive for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Figure 1a). Clinically, the majority of the viral lesions were painful ulcers with wide extension, covered by a fibrinoid membrane or thin crust (Figure 1b). In patients with coagulation disturbances, some hemorrhagic areas surrounded the ulcerated surface (Figure 1c). Some ulcerations positive for SARS-CoV-2 were deeper and showed irregular borders (Figure 1d). The patients with these oral lesions did not show cutaneous changes during the clinical follow-up.

The lesions were treated with systemic valacyclovir (8/18, 44.4%) or systemic acyclovir (9/18, 50.0%). Photobiomodulation with a laser was indicated for all patients. The median time for complete remission was 8 days. However, none of the patients with oral lesions positive for SARS-CoV-2 showed complete remission in the 17-day follow-up period.

Based on these results, we can assume that the majority of the oral lesions suggestive of viral infection were negative for SARS-CoV-2 but positive for herpesviruses (72.7%). A similar condition has been reported in cutaneous lesions in COVID-19 patients. The high frequency of herpesvirus infection in the skin of COVID-19 patients raised the hypothesis that there is an interaction between SARS-CoV-2 and herpesviruses.⁵ This brief retrospective study allows us to formulate a similar hypothesis for lesions in the oral cavity, in which SARS-CoV-2 would be a potential transactivator agent working as a primer and triggering the activation of latent viruses, such as human herpesvirus-3, -6, -7, cytomegalovirus, and Epstein-Barr virus.⁵

CONFLICT OF INTEREST

None declared.

Letícia Mello Bezinelli¹
 Fernanda de Paula Eduardo¹
 Mariana Henriques Ferreira^{1,2}
 Marcella Ferreira Gobbi^{1,2}
 Fabiola Germano de Castro¹

Gabriela Marcelle Almeida Sant Ana dos Santos¹
 Marcele Liliane Pesavento¹
 Paulo Vidal Campregher¹
 Luciana Corrêa²

¹Hospital Israelita Albert Einstein, São Paulo, Brazil

²University of São Paulo, São Paulo, Brazil

Correspondence

Fernanda de Paula Eduardo, Hospital Israelita Albert Einstein, Av. Albert Einstein, 627/520, São Paulo, São Paulo, CEP 05651-901, Brazil.
 Email: fpeduard@einstein.br

ORCID

Fernanda de Paula Eduardo <https://orcid.org/0000-0001-6939-988X>

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