

Viral enanthema in oral mucosa: A possible diagnostic challenge in the COVID-19 pandemic

Dear Editor,

Caused by SARS-CoV-2, the coronavirus disease 2019 (COVID-19) is a potentially deadly coronavirus-associated acute respiratory illness whose most common symptoms are cough, fever, fatigue, sputum production, and shortness of breath (Guan et al., 2020). Although only 0.2% of the 1,099 patients evaluated by Guan et al. (2020) developed cutaneous lesions, recent articles have reported relevant eruptive skin rash (i.e., exanthema) sometimes involving mucous membrane (i.e., enanthema) in COVID-19 patients (Chaux-Bodard, Deneuve, & Desoutter, 2020; Galván Casas et al., 2020; Martín Carreras-Presas, Amaro Sánchez, López-Sánchez, Jané-Salas, & Somacarrera Pérez, 2020; Recalcati, 2020; Suchonwanit, Leerunyakul, & Kositkuljorn, 2020).

Recalcati (2020), for example, reported that 20.4% of 88 COVID-19 patients presented cutaneous manifestations such as erythematous rash, generalized urticaria, and vesicles. They suggested that the skin lesions were similar to ones found in common viral diseases but emphasized that additional studies are necessary to confirm its association with COVID-19. Other authors, after reviewing 18 articles reporting cutaneous lesions in COVID-19 patients, suggested that the possible cutaneous manifestations of the virus may be classified into two groups—viral exanthema and vasculopathy-related skin manifestation—but highlighted the possibility of secondary cutaneous reactions to treatment as well (Suchonwanit et al., 2020).

In a dermatological case collection survey of COVID-19 patients, Galván Casas et al. (2020) classified the cutaneous manifestations in five clinical patterns: maculopapular eruptions, urticarial lesions, pseudo-chilblains, other vesicular eruptions, and livedo or necrosis. The authors also reported that some patients presented other manifestations such as enanthema. In an atlas published as supplementary material, the authors presented the case of a patient with maculopapular eruption in the oral mucosa (i.e., enanthema) localized in the palate, palatal gingiva, lower buccal gingiva, and lower lip mucosa.

Oral manifestations of earlier coronavirus-related diseases such as Middle East respiratory syndrome (MERS) are ill-defined (Scully & Samaranayake, 2016). Concerning COVID-19, to the best of our knowledge, only two reports specifically address oral enanthema. First, Martín Carreras-Presas et al. (2020) described oral lesions in one confirmed and two suspected patients; the confirmed patient

presented blisters in the internal lip mucosa, desquamative gingivitis, and widespread skin rash, while the other two cases presented painful palatal ulcers similar to herpetic lesions. Second, Chaux-Bodard et al. (2020) reported an oral lesion as a possible inaugural symptom of COVID-19 in a patient exhibiting painful inflammation of the tongue papillae on Day 1, which evolved into an erythematous macule and subsequently into an asymptomatic ulcer. An erythematous skin lesion developed on Day 3, and the positive diagnostic test was performed on Day 8.

In this context, when health professionals, especially dentists, are faced with enanthema in oral mucosa as a possible diagnostic challenge in the COVID-19 pandemic, it is important to review some of the main viral diseases associated with oral enanthema, as illustrated in Table 1 (Castro & Ramos-e-Silva, 2020; Drago et al., 2017; Santosh & Muddana, 2020; Scully & Samaranayake, 2016). Such action is especially relevant in tropical countries such as Brazil, where other viral diseases are in endemic transmission.

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CONFLICT OF INTEREST

None to declare.

AUTHOR CONTRIBUTION





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TABLE 1 Main viral diseases associated with oral enanthema

Viral disease	Etiology	Oral enanthema	Additional signs and symptoms
Chikungunya ^{a,b,d}	Chikungunya virus	Aphthous-like ulcers and oral lesions similar to Koplik's spots	Skin rash on face and arms and fever
Dengue fever ^{a,b,d}	Dengue virus (DENVs)	Gingival bleeding and gingival and lip swelling	Skin rash, fever, possible petechiae and purpura, myalgia, arthralgia, headache, nausea, and vomiting
Ebola virus disease ^{b,d}	Ebola virus	Gingival bleeding, white or red patches, aphthous-like ulcers, and grayish exudative lesions	Skin rash, pain, epistaxis, bleeding, and conjunctivitis
Hand, foot, and mouth disease ^a	Echoviruses and coxsackievirus types A and B	Painful ulcers	Skin rash on hand and foot, fever, and malaise
Herpangina ^b	Coxsackievirus type A	Papulovesicular lesions in soft palate and tonsils	Fever, sore throat, vomiting, and backache
Herpes simplex infection ^{b,c}	HSV-1 and HSV-2	<i>Primary herpes simplex infection:</i> vesicles, ulcers, and generalized gingivitis <i>Recurrent herpes simplex infections:</i> vesicles or ulcers in lip vermilion and adjacent skin (i.e., recurrent herpes labialis) or in keratinized oral mucosa as palate or gingiva (i.e., recurrent intraoral herpes)	Fever, malaise, nausea, headache, lymphadenopathy, and vomiting Local prodromal symptoms
Human immunodeficiency viruses ^{b,d}	HIV-1 and HIV-2	Maculopapular lesions and painful oral ulcerations	Skin rash on the trunk, hand, and foot (associated with seroconversion)
Infectious mononucleosis ^{b,c}	Epstein-Barr virus (EBV)	Ulcers	Fever, lymphadenopathy, pharyngitis, cough, rhinitis, and hepatosplenomegaly
Measles ^{a,b}	Paramyxoviridae virus family	Koplik's spots (i.e., grayish-white to erythematous papules typically seen on the buccal mucosa)	Fever, coryza, cough, conjunctivitis, and skin rash on the forehead, hairline, and postauricular area
Roseola infantum or exanthema subitum ^{a,b}	Human herpesvirus (HHV): HHV-6 or HHV-7	Nagayama spots (i.e., erythematous papules involving the soft palate and uvula)	Skin rash starting on the trunk and spreading peripherally, periorbital edema, fever, cough, rhinorrhea, and diarrhea
Varicella-zoster infection ^{b,c}	Varicella-zoster virus (VZV)	<i>Chickenpox infection:</i> small, widespread blister-like lesions <i>Herpes zoster infection (i.e., shingles):</i> Unilateral painful vesicular lesions in areas supplied by the trigeminal nerve	Skin rash starting on the trunk and spreading to the face and extremities, pruritus, fever, headache, pharyngitis, rhinitis, and anorexia Pruritus, paresthesia, postherpetic neuralgia, and the possibility of alveolar bone necrosis with tooth loss
Zika ^{a,b}	Zika virus	Ulcers	Skin rash, pruritus, prostration, headache, arthralgia, myalgia, non-purulent conjunctivitis, and lumbar pain

^aCastro and Ramos-e-Silva (2020).^bDrago et al. (2017).^cSantosh and Muddana (2020).^dScully and Samaranayake (2016).**KEYWORDS**

COVID-19, enanthema, exanthema, oral mucosa, viral diseases

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