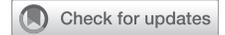


COVID-19 ORAL MANIFESTATIONS

Taste Disorders and Oral Mucosal Lesions



BACKGROUND

Acute infection with COVID-19 is related to numerous signs and symptoms, some of which involve the oral cavity. These include taste disorders, nonspecific oral ulcerations, desquamative gingivitis, petechiae, and coinfections, including candidiasis. Whether these manifestations are part of the infection per se or a systemic consequence remains unclear. A living systematic review (LSR), which allows continuous surveillance of recently published studies through periodical searches so that recent relevant information can be added, was done to provide a comprehensive and up-to-date summary of the oral manifestations being found in patients with COVID-19.

METHODS

A literature search of the Embase, LILACS, Livivo, PubMed, Scopus, and Web of Science databases was conducted, along with a search in the grey literature that included Google Scholar and OpenGrey. A manual search of reference lists of included studies was also performed. The 40 studies selected included 33 cross-sectional studies and 7 case reports covering 10,228 patients between ages 11 and 88 years from 19 countries. The main outcome was the prevalence of oral manifestations, which were divided into a group of taste disorders and one of oral mucosal lesions. Secondary outcomes for taste disorders were the prevalence of the various disorders and associations between taste disorders and COVID-19 positivity, severity, and patients' sex. Those for oral mucosal lesions were clinical presentation of the lesion and the diagnosis hypothesis, which was based on whether it was a coinfection, an autoimmune and inflammatory manifestation, or a primary sign of SARS-CoV-2 infection.

RESULTS

Taste Disorders

The most common oral manifestation was gustatory impairment, occurring with a prevalence of 45%. The prevalence was 38% for dysgeusia, 35% for hypogeusia, and 24% for ageusia. Many patients who actually had smell disorders complained of a loss of taste, but the taste impairment was actually measurable in less than 5% of these cases. Taste disorders lasted a mean of 15 days, and patients appeared to recover fully from the symptoms. Fifty-three percent of North American patients, 50% of European patients, and 27% of Asian patients reported taste disorders. Relationships were noted between taste disorders and COVID-19 as well as with mild to moderate severity of infection. A significant relationship was noted for female patients.

Oral Mucosal Lesions

Oral mucosal lesions were only reported in case reports. The clinical aspects of these lesions varied, with white and erythematous plaques, irregular ulcers, small blisters, petechiae, and desquamative gingivitis. Some were localized and others were diffuse. The structures most often involved were the tongue, palate, lips, gingiva, and buccal mucosa. For patients with mild cases of COVID-19, the oral mucosal lesions developed before or concurrent with the initial respiratory symptoms. Patients who required medication and hospitalization developed lesions about 7 to 24 days after the respiratory onset. All patients had healing within 3 to 21 days as a result of topical treatments, oral hygiene, or spontaneously. It appeared that the oral mucosal lesions developed as secondary manifestations and coinfections related to the patient's weakened systemic state.

DISCUSSION

Taste disorders in patients with COVID-19 appear to be common and should be considered as part of the disease's onset and progression. However, oral mucosal lesions are more likely to develop secondarily or to be coinfections.

Clinical Significance

Few clinical COVID-19 studies cite oral symptoms, but changes in taste are the most commonly described oral manifestation. Nearly half of the patients with COVID-19 develop taste disorders. There appear to be associations with COVID-19 positivity, mild to moderate severity of disease, and female sex. In contrast, oral mucosal lesions seem to represent coinfections, may result from immune impairment, and may be adverse reactions rather than an infection caused by SARS-CoV-2.

Amorim dos Santos J, Normando AGC, Carvalho da Silva RL, et al: Oral manifestations in patients with COVID-19: A living systematic review. *J Dent Res* 100:141-154, 2021

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