

Patients with COVID-19 may present some oral manifestations

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A commentary on

Eghbali Zarch R, Hosseinzadeh P.

COVID-19 from the perspective of dentists: A case report and brief review of more than 170 cases. *Dermatol Ther* 2021; DOI: 10.1111/dth.14717.

Abstract

Data sources Medline (using PubMed) and Google Scholar. Also, a case was reported by the authors.

Study selection Case reports dealing with oral manifestations of COVID-19.

Data extraction and synthesis Two reviewers independently reviewed articles and papers which reported any oral lesions in patients with COVID-19 and summarised the data. In addition, they collated all relevant information about each case.

Results The authors described a case history in which oral symptoms were observed which included dry mouth, acute dysgeusia, mild pain and burning sensation in lower lip mucosa, then after two days, vesicles appeared in the same region with simultaneous systemic symptoms of COVID-19. The patient reported a previous history of herpetic infections. After seven days, oral lesions were healed and systemic symptoms regressed on day 14.

Literature review Seventeen studies reporting 226 confirmed cases, and the case reported by the review authors, were included. The age range was between 9–90 years. More than 170 cases developed oral manifestations. The most common oral manifestations were dry mouth (n = 75), dysgeusia (n = 71) and pseudomembranous fungal structure (n = 67). Changes in tongue sensation (n = 48) and ulceration (n = 28), muscle pain during mastication (n = 15), swelling in the oral cavity (n = 10) and herpetic lesions (n = 6) were other common symptoms. The mean onset time of the oral manifestation was 7.21 days after systemic symptoms (range: 10–42 days). In 42 cases, oral lesions resolved spontaneously or with some basic treatment within three weeks.

Conclusions Some patients with COVID-19 may present oral manifestations during their course of the disease; however, we do not know if there is a causal relationship between COVID-19 and these manifestations or not.

Commentary

Since the emergence of the global COVID-19 pandemic, the scientific community has attempted to shed light on different presentations of the virus and the many symptoms the disease may cause.¹ It is now believed that we face a complex disease which can cause harm to many organs other than the respiratory

Practice points

- Some patients with COVID-19 may present oral manifestations that have developed during the disease course.
- These oral manifestations usually resolve spontaneously or with simple treatment within three weeks.

system. These include the cardiovascular system,² gastrointestinal tract³ and kidneys.⁴

Although the oral cavity is the opening for the gastrointestinal tract and respiratory system, and many systemic diseases have oral manifestations (for example, autoimmune, haematologic, endocrine and neoplastic processes),⁵ there has been little information, mainly through case reports and case series, regarding oral complications caused by COVID-19. Eghbali Zarch and Hosseinzadeh's study⁶ aimed to summarise the best available evidence regarding oral manifestations of COVID-19 alongside presenting a case with COVID-19, who consulted with them about vesicles in her lower lip labial mucosa.

Their study showed that the most common oral cavity-related manifestations were dry mouth (n = 75), dysgeusia (n = 71), pseudomembranous fungal structure (n = 67), changes in tongue sensation (n = 48) and ulceration (n = 28), muscle pain during mastication (n = 15), swelling in the oral cavity (n = 10) and herpetic lesions (n = 6). All information came from 12 case reports (including their case) and six case series. Case reports and case series are among the lowest parts of the evidence pyramid as they are prone to bias and provide low-quality information;⁷ therefore, the quality of this review was very low. Furthermore, no conclusions about the prevalence of different oral manifestations of COVID-19 can be drawn from these data. Some other reviews have provided statistics regarding the prevalence of some oral manifestations.^{8,9}

During the first days of the pandemic, dental surgery was classified among the most dangerous occupations regarding the risk of potential exposure to SARS-CoV-2.¹⁰ So, unlike other healthcare professionals, dentists were supposed to close their offices because dentistry was believed to be a non-emergency service.¹¹ Studies show that other healthcare professionals pay less attention to the oral cavity in their examinations.^{12,13} The reduction in dental examinations of patients and the fact that the oral cavity is rarely observed by other healthcare workers could explain why there have been few reports regarding oral complications of COVID-19.

However, there is still a fundamental question: 'does COVID-19 cause any oral complications?' This is important since many reported oral symptoms may have other causes rather than COVID-19. While there has been a tendency in dental research society to link oral disorders with systemic diseases, it should be noted that much of the available research is of poor quality.¹⁴

GRADE rating



Any oral complications in patients with COVID-19 may arise from their social, biological or psychological backgrounds,^{15,16} and from other causes and pathologies, and may be coincidental to COVID-19 infection. Researchers and practitioners should keep this in mind.

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