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Case Report of Oral Manifestations of Covid-19

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Abstract

There has been a reported number of cases showing a wide variety of oral alterations with the potential of being associated with COVID-19. We present a case report of a 59-year-old female. The diagnosis for SARS-CoV-2 was confirmed by a positive antigen test. The patient noticed an aphthous-like lesion on the right side of the lower lip that presented from the first day of the disease. The patient suffered also from headaches that became stronger; she had a sore throat, pain in both ears, dysgeusia, and anosmia. On the seventh day the patient felt stomach ache and nausea, with the lesion being most painful compared to the previous days. After the tenth day the aphthous-like lesion was not visible, but still painful. Two months later the lesion was no longer visible, but the patient still felt a concavity in the area when exploring it with her tongue. No pain or discomfort was described at this stage.

A variety of oral lesions in SARS-CoV-2 disease have been reported in the literature. Regarding oral changes, usual clinical appearance described comprises aphthous-like lesions. Older age and severity of COVID-19 are the most common factors that predict severity of oral lesions.

The exact aetiology and pathogenesis of oral changes in patients with this viral infection are not yet well known. More studies are required to elaborate and confirm the relationship between COVID-19 and the described oral manifestations of SARS-CoV-2.

Keywords: COVID-19; oral manifestations, SARS-CoV-2

Introduction

Severe acute respiratory syndrome coronavirus 2 is a highly contagious transmissible and pathogenic disease that emerged first in Wuhan, China, in December 2019 and caused a pandemic which menaced human health and public security (1). Symptoms of COVID-19 are variable and most of them include a fever, dry cough, shortness of breath, expectoration, headache, dysgeusia, dysosmia, and breathing difficulties (2,3). Less frequent symptoms are muscle soreness, rhinorrhoea, anorexia, odynophagia, chest tightness, shortness of breath, dyspnoea, nausea, vomiting, diarrhoea, headache, pharyngalgia, shivering, and abdominal pain (4, 5, 6). A low percentage - 11% of patients stay asymptomatic (7).

There has been a reported number of cases showing a wide variety of oral alterations with the potential of being associated with COVID-19 (8). The most common lesions seen in the oral cavity are: dysgeusia, aphthous-like lesions, petechiae, ulcerations, erosions, macules, enanthem, vesicles and pustules, herpetiform lesions, necrosis, glossitis, candidiasis, mucositis, drug eruption, depapillation or geographic tongue, angular cheilitis, parotitis, Kawasaki-like, erythema multiforme, necrotizing periodontal disease, atypical Sweet syndrome, angina bullosa-like, Melkersson-Rosenthal syndrome, halitosis, haemorrhagic crust, whitish areas, necrosis, petechiae, swelling, spontaneous bleeding and erythema (9-20). In the maxillofacial area most common sites affected were the tongue, the labial mucosa, and the palate (5;10).
The most relevant reasons for their appearance are bad oral hygiene, stress, opportunistic infections, underlying diseases, trauma after intubation, vascular compromise, fatigue, immunosuppression, hyper-inflammatory response, stress and vasculitis (10, 21, 22). Oral changes are symptomatic in the majority of the patients - 68% and are equally distributed in genders. Older patients had more severe and widespread oral lesions.

The severity of COVID-19 depends on the susceptibility to infection, advanced age, presence of cardiovascular diseases or diabetes mellitus (9; 23).
The etiopathogenesis of these lesions seems to be multifactorial. Further investigations will be helpful to find the relationship of these lesions with the viral contamination (5).

Case Report

We present a case of a 59 year old female. The diagnosis for SARS-CoV-2 was confirmed by a positive antigen test. She had no current diseases. In 2012, nine years earlier she had had breast cancer, that had been removed with breast removal surgery and prosthetics placed instead. She has been taking medicines for stress for the past 20 years - Citalopram 20mg, Alprazolam 0.5mg. The daily medication includes Propranolol 20mg.

The patient noticed an aphthous-like lesion on the right side of the lower lip that presented on the first day of the disease (fig. 1). The patient was experiencing headaches that became stronger. Other complains were a sore throat, pain in both ears, dysgeusia, and anosmia.

Figure 1: Day 6

Figure 2: day 7

On the seventh day, the patient had stomach ache and nausea, the lesion was very painful (fig. 2).
After the tenth day the aphthous-like lesion was no longer visible, however it was still painful (fig. 3-4).

Local treatment was administered in the form of drops.
Two months later the aphtha was no longer visible, but the patient still felt a concavity in the area of the aphtha when feeling the area with her tongue. No pain or discomfort was described at this stage.

Figure 3: day 8

Figure 4: day 10

Discussion

Different investigations show lack of consistency and variability of lesions in the oral cavity associated with COVID-19. Different viruses like herpesviruses, human papillomavirus, and Coxsackie virus are responsible for primary oral lesions. Others, such as the human immunodeficiency virus, affect the oral cavity due to immune system weakness. The appearance of lesions due to COVID-19 could be related to the direct or indirect action of the virus over the oral mucosa cells, coinfections, immunity impairment, and adverse drug reactions. All physicians are encouraged to perform regular and proper examination of the oral cavity of all suspected and confirmed patients to identify the disease's possible early symptoms (22). There are a lot oral symptoms in COVID-19, but the coexistence with the main disease has not been fully understood and stated.There is still no confirmation on whether the oral manifestations appear due to the loss of adequate immune reaction. Angiotensin-converting enzyme 2 (ACE2), which permits the attachment of the virus, is present in the oral cavity (24). Dental healthcare professionals are susceptible to COVID-19 due to the transferability via the oral cavity and the presence of aerosol created (25), so finding these lesions before any manipulation using aerosol could be a good preventative measure to protect the dental team.

Regarding oral changes, one of the most usual clinical appearances described are aphthous-like lesions (5). Brandão et al. describe eight cases of necrotic ulcers in the oral cavity or aphthous-like ulcers. They appeared early in the developement of the disease, soon after the appearance of dysgeusia. The most common area affected in the oral cavity by aphthous-like ulcers are the tongue, palate, lips and the

oropharynx (27). The majority of oral lesions are aphthous-like ulceration but there is no data of recurrent aphthous stomatitis (12).
Examination of an 81 year male showed a lot of aphthous-like ulcers with dissimilar dimentions with rugged edges, covered with a purulent membrane (26). This finding suggested external necrosis in the lip mucosa, and the anterior dorsal tongue. This patient also has a proven herpes simplex virus co-infection. Aphthous-like ulcerations developed early in the development of the disease and following the appearance of dysgeusia. Most affected are the tongue, palate, lips and the oropharynx (5).
Iranmanesh et al. (2020) describe the appearance of aphthous-like lesions in sixteen cases, proposing that neutrophil stress and immunosuppression could be a causative agent for this condition to appear in infected patients (10).

Conclusion

A variety of oral lesions in SARS-CoV-2 disease have been reported in the literature. Case series and case reports describe a relatively high frequency of aphthous-like lesions (28). Older age and severity of COVID-19 are the most common factors that predict severity of oral lesions. More studies are required to elaborate or confirm the relationship between COVID-19 and the described oral manifestations of SARS-CoV-2.

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