Oral Lesions Associated with Post-COVID-19: Disease Sequels or Secondary Infection?

Lesiones Orales Post COVID-19: ¿Secuelas de la Enfermedad o Infección Secundaria?

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ABSTRACT: The aim of this study was to report the presentation of oral lesions found in a post-COVID-19 patient. A 78-year-old female patient, fifteen days post-COVID-19, confirmed through the PCR test, had pain in the mouth with a Visual Analogue Scale (VAS) 8, dysgeusia and odynophagia. Erosive lesions were observed with circumscribed halos, of different sizes along the entire length of the dorsum, bilateral margins of the tongue and labial mucosa. Topical use of vitamin E 40 mg, nystatin oral suspension 100000UI and artificial saliva spray was prescribed. After 14 days, complete repair was observed. However, the patient worsened her respiratory failure and died after 2 days. There is still insufficient evidence to confirm whether this patient's oral lesion is the result of a direct viral infection with SARS-CoV-2. The relevance of inserting the dentist in the care team for infected patients stands out and we encourage the performance of intraoral evaluation, even after medical discharge. In this way, it will be possible to understand its long-term oral manifestations of COVID-19.

KEY WORDS: COVID-19, SARS-CoV-2, oral lesions, immunosuppression, intensive care unit.

INTRODUCTION

Corona virus disease (COVID-19) is caused by a novel coronavirus SARS-CoV-2, started in China and was declared a pandemic by the World Health Organization (Tu et al., 2020). Currently, the disease has spread to 188 countries, with more than 162 million reported cases and over 3.3 million deaths (World Health Organization, 2021). The lung is the main target organ and the manifestations are characterized by fever, dyspnea, dry cough, tiredness and diarrhea. With the increase in cases, new extra pulmonary clinical signs have been reported, such as gastrointestinal, cardiovascular, cutaneous, hematological and maxillofacial signs (Thakur et al., 2021).

Among the maxillofacial manifestations, taste dysfunctions are the most common, present in 45% of patients (Dos Santos et al., 2021). Although, recent studies have suggested that oral lesions could be a possible manifestation associated with COVID-19. These lesions were quite heterogeneous, varying in their location and clinical aspects (Halboub et al., 2020; Gomes et al., 2021; Dos Santos et al.). Its pathogenesis and etiology is still questionable. Interestingly, other study showed that these lesions may be related from treatment of COVID-19 or immunosuppression (Guerrero, 2021; Pérez-Sayáns et al., 2021). The aim of this study was to report the presentation of oral lesions found in a post-COVID-19 patient.

CASE REPORT

A 78-year-old female patient, fifteen days post-COVID-19, confirmed through the PCR test, had pain in the mouth with a Visual Analogue Scale (VAS) 8, dysgeusia and odynophagia. The patient was lucid, with a regular systemic state, using O2 6UI and 88% saturation. Erosive lesions were observed with

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circumscribed halos, of different sizes along the entire length of the dorsum, bilateral margins of the tongue and labial mucosa (Figs. 1A-D). Some of these coalesced, forming a single lesion. The hypotheses of secondary infection from treatment, such as herpes simplex or candidiasis, or benign migratory glossitis after COVID-19 have been suggested. Biopsy was not performed due to the patient’s weakened condition.

Topical use of vitamin E 40 mg, nystatin oral suspension 100000UI, acyclovir (Zovirax® 250 mg) and artificial saliva spray (Dry mouth) was prescribed. After 1 day, it was observed that the circumscribed halos became more evident (Figs. 1E-H). The follow-up was maintained, it was observed that the areas started the repair (Figs. 1I-L). Clinical improvement was noted through progressive epithelialization of the lesion (Figs. 2A-P) and pain, VAS 2. After 14 days, complete repair was observed (Figs. 2Q-T). However, the patient worsened her respiratory failure and died after 2 days.

DISCUSSION

The most common oral manifestations found in the literature were ulcers, vesiculobullous lesions, erythematous and white plaques. Among the locations, the dorsum tongue, hard palate and labial mucosa were the most affected sites (Halboub et al.; Iranmanesh et al., 2020; Gomes et al.). Fidan et al. (2021) analyzed 74 patients with COVID-19 and observed that 78.3 % had an oral lesion. Iranmanesh et al. noted that 68 % of these cases were symptomatic. Although, no study has investigated post-COVID-19 and follow up (Iranmanesh et al.).
Fig. 2. Progressive tissue epithelization of the lesion, during the (A-D) fifth, (E-H) seventh, (I-L) tenth, (M-P) twelfth and (Q-T) fourteenth day of treatment.
With the interaction between SARS-CoV-2 and angiotensin-converting enzyme 2 (ACE2) receptors, there is an increase in cell wall permeability long-term, which could interrupt the function of oral keratinocytes, resulting in ulcers, erosion and necrosis (Brandão et al., 2021). In addition, these lesions could be justified by the variable systemic inflammatory reaction, which can induce inflammation and vascular complications, with primary or secondary changes to vascular-hematological damage, as seen in cutaneous manifestations (Brandão et al.; Dos Santos et al.). They can also be related to another type of secondary infection, as herpes simplex and candidiasis, as well as being caused by xerostomia or secondary to the use of drugs to treat COVID-19 (Pérez-Sayans et al.).

Therefore, these manifestations are probably secondary manifestation post treatment or due to the systemic deterioration caused by the disease. Therapeutic modalities used for COVID-19 infection, may contribute to oral health-related problems, as a result of an impaired immune system and susceptible mucosa (Halboub et al.; Bezerra et al., 2020; Pérez-Sayans et al.). Stress, due to social restrictions, can also play an important role in the appearance of these conditions (Petrescu et al., 2020).

CONCLUSION

For this reason, the relevance of involvement of the dentist in the care team for infected patients stands out and we encourage the performance of intraoral evaluation, even after medical discharge and follow up. In this way, it will be possible to understand its long-term oral manifestations post-COVID-19.

REFERENCES

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