

Oral vesiculobullous lesions associated with SARS-CoV-2 infection

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1 | INTRODUCTION

Humans infected with SARS-CoV-2 are at risk of developing serious and life-threatening conditions, such as severe acute respiratory syndrome.

Recent data suggest the more common signs and symptoms of SARS-CoV-2 infection to be headache, sore throat, hyposmia, hypogeusia, diarrhea, dyspnea, and in severe cases pneumonia. (Wang et al., 2020).

Some authors in Italy reported cases of dermatologic implication in patients affected by SARS-CoV-2 infection (Recalcati, 2020). Since then, we have seen more reports describing dermatologic involvement, including lesions that range from affection of hands and feet in teenagers to vasculitis, rash, urticaria, and varicella-like lesions. (Estebanez et al., 2020).

Spain has been severely affected by the COVID-19 outbreak (Bonanad et al., 2020). The majority of dental clinics and university clinics are closed, only treating emergencies if the entity has the protective measures necessary. There is a nationwide lack of serological tests available, both for patients and for healthcare providers.

We here present three cases associated with this virus: two where there is a suspicion of COVID-19 and one case of confirmed infection. All cases presented ulcers or blisters in the oral cavity, appearing and developing during the isolation period between the last week of March and the first week of April 2020. We were not able to examine them in our clinic due to the state of alarm declared from the 14th of March, but offered the possibility of video consultations.

2 | PATIENT 1

A 56-year-old healthy male patient without any relevant medical history was isolated with suspected infection of SARS-CoV-2. He presented asthenia and fever for 2 days, reporting hyposmia, dysgeusia, and enlargement of lymph nodes in the neck. Testing for COVID-19 was not performed in the hospital due to the non-severity of his case. He was sent home by his general practitioner. He complained of pain in his palate and sore throat. We asked him to send us a photograph (Figure 1). The lesions resembled a herpetic recurrent



FIGURE 1 Multiple orange-colored ulcers with an erythematous halo and symmetric distribution on the right hard palate of the patient



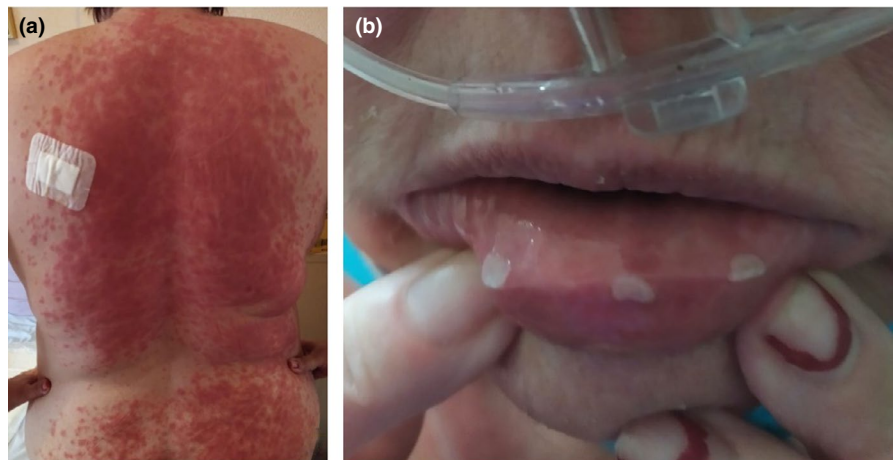
FIGURE 2 Multiple pinpoint yellowish ulcers with an erythematous halo on the left hard palate of the patient

stomatitis; however, it was the first time the patient had them. We prescribed valaciclovir 500 mg every 8 hr for 10 days, and topical antiseptics with chlorhexidine and hyaluronic acid. After 10 days, there was a full recovery of the oral lesions. The patient is currently waiting for serological testing to confirm whether or not he had a non-severe COVID-19 disease.

3 | PATIENT 2

A 58-year-old male patient with diabetes and hypertension reported pain on his palate. He assumed it was a bacterial infection of a tooth and reached out to us for an appointment. His wife had been diagnosed with COVID-19, and they were both isolated in their home.

FIGURE 3 (a) The aspect of the back of the patient the day the biopsy was performed at the hospital. The patient reported that the lesions were more pruritic than painful. (b) The patient presented 3 blisters on the inner lip mucosa. The blister located closer to her right commissure was intact and tense. The bulla located on the left appeared to be broken. The lesions were affecting both intra- and extraoral mucosa, and the patient developed crusts on the external lip mucosa 3 days after this photograph was taken



We asked for a photograph, and we could see multiple small ulcers on his palate with unilateral affection (Figure 2). The patient did not have any previous history of herpetic infection.

The lesions were painful and solved within 1 week using topical antiseptic mouthwash.

4 | PATIENT 3

A 65-year-old female patient developed high fever, diarrhea, and pain on her tongue, on the 12th of March 2020. She suffered from obesity and hypertension controlled by diuretics and an ACE inhibitor. A week after developing symptoms, she fainted at home and was taken to the hospital where she was diagnosed with bilateral pneumonia due to SARS-CoV-2 infection. She was given antibiotics, corticosteroids, and antiviral drugs (lopinavir 200 mg, ritonavir 50 mg, hydroxychloroquine 200 mg). On the 30th of March, she was discharged. On the 4th of April, she developed a rash under her breasts and other parts of the skin, including her back and genital area. She had complained of pain on her tongue from the beginning, but she told us she had not been given an intraoral examination yet. She was taken back to the hospital where the dermatologist performed a biopsy and prescribed antifungals. A week later, she developed blisters in her internal lip mucosa as well as a desquamative gingivitis (Figure 3). We prescribed hyaluronic acid and chlorhexidine mouthwash. Her general practitioner prescribed prednisolone 30 mg per day. Her lesions improved within 3 days, and she is now recovering in isolation at home. The result of the biopsy revealed non-specific morphological findings with some criteria suggestive of viral exanthema or urticariform dermatitis with discrete blood extravasation.

In our opinion, it makes good sense that this virus provokes exanthematic lesions that may resemble other viral processes we are used to diagnosing in the dental clinic.

The patients presented ulcers or blisters, which are common elementary lesions observed in other viral processes, such as aphthous fever, hand, foot, and mouth disease and herpetic gingivostomatitis, as described by Scully and Samaranyake (2016).

In the first 2 cases, lesions were affecting keratinized tissue, as seen in herpes simplex lesions (Scully & Samaranayake, 2016). In the last case, oral lesions affected both keratinized and non-keratinized tissue and were more compatible with an erythema multiforme (Trayes, Love, & Studdiford, 2019; Schwartz & Janniger, 2020).

As we were not able to perform biopsies, further studies need to be carried out in order to determine whether oral manifestations are common in patients affected by SARS-CoV-2 infection or if the emotional distress of the situation itself could trigger such lesions (Suzich & Cliffe, 2018; Chida & Mao, 2009).

It is important to mention that the 3 cases all reported having had pain, oral ulcers, or blisters before seeking medical advice. We suspect that intraoral lesions often are misdiagnosed due to the lack of intraoral examinations, considering the severity of other pathological processes that might concur with this viral infection. To the best of our knowledge, this is the first case report of a COVID-19 patient presenting intraoral manifestations.

We encourage all medical doctors, dentists, and dermatologists to perform intraoral examinations in patients suspected or affected by SARS-CoV-2, always when having the recommended protection measures available.

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CONFLICTS OF INTEREST

None to declare.

AUTHOR CONTRIBUTION

Carmen Martín Carreras-Presas: Writing-original draft. **Juan Amaro Sánchez:** Writing-original draft. **Antonio Francisco López-Sánchez:** Writing-review & editing. **Enric Jané-Salas:** Resources. **María Luisa Somacarrera Pérez:** Supervision.

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