

MANIFESTATION OF MULTIFORM EXUDATIVE ERYTHEMA IN THE HEAD OF THE MOUTH IN A PATIENT INFECTED WITH COVID-19

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ANNOTATION: Coronavirus disease 2019 (COVID-19) is a viral infection caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that affects the oral mucosa. The full range of oral manifestations of COVID-19 is unknown, and the characteristics of oral manifestations of COVID-19, including loss of taste, oral Clinical changes such as lesions and xerostomia are manifested in the oral cavity. The aim of this study is to report a case of oral erythema multiforme (OCE) presenting as oral, lip and skin leukaemias in a patient with COVID-19.

KEY WORDS: COVID-19, KSHE erythema multiforme, vesiculobullosis, leukemia, Stevens-Johnson syndrome, maculopapular exanthema, papulo-vesicular rash, Herpes simplex virus (HSV).

1. Material and research methods:

Coronavirus disease 2019 (COVID-19) is caused by severe acute respiratory syndrome coronavirus 2 (SARS-COV-2), which causes high infection rates in various countries [1] and has been declared a global public health problem. infectious respiratory disease. World Health Organization (WHO) [2]. The most common symptoms are fever, shortness of breath, dry cough, anorexia, sore throat pain, tremors, confusion, headache, nausea, vomiting and diarrhea [3, 4]. Respiratory complications of SARS-CoV-2 infection can progress to severe acute respiratory syndrome or additional complications affecting the kidneys, heart, central and peripheral nervous system, and gastrointestinal tract [5]. Several reports A variety of orofacial manifestations, including oral ulcers, vesiculobullous leukemias, xerostomia, and acute sialadenitis, have been reported in patients with COVID-19. [6-8]. In addition, SARS-CoV-2 infection can cause dermatologic manifestations, including maculopapular exanthema, papulo-vesicular rashes, painful acral red-purple papules, livedo reticularis, leukosis, and petechiae [9].

Erythema multiforme (CSHE) is a rare acute mucocutaneous disease of the skin and mucous membranes, with a wide clinical picture, mild, fulminant or severe (Stevens-Johnson syndrome). can be; it can even lead to toxic epidermal necrolysis (TEN) [10] KSHE manifests as a skin rash with or without affecting the oral cavity or other mucous membranes [11, 12] and every It can occur at any age, but is most common in young adults. [13] Many etiological factors are involved; but in 90% of cases, the main cause of KSHE is infectious agents. Herpes simplex virus (HSV) is the main pathogen in 1- and 2-year-old adults (>80% of cases), followed by Epstein-Barr virus (EBV) and Mycoplasma pneumoniae [14]. Other triggers for KSHE include drugs, including antibiotics such as penicillins, cephalosporins, macrolides, and sulfonamides; non-steroidal anti-inflammatory drugs; anticoagulants; and others [15]. The lesion begins as numerous circumscribed red or pink spots, which later become papular, and the papules can gradually enlarge and form a plaque with a diameter of several centimeters. The central part of the papule or plaque gradually turns dark red or brown, or turns purple. Sometimes crusts or vesicles form in the center of the lesions. The diagnosis of KSHE is

based on clinical data, and blood tests may reveal mild leukocytosis, neutropenia, or mild anemia. Electrolyte values may change if the patient becomes dehydrated [16].

Some of the conditions often considered in the differential diagnosis of KSHE include autoimmune bullous disease, drug rash, erythema fibula, lupus erythematosus, erythematous rash, polymorphic rash, Stevens-Johnson syndrome, TEN, urinary vasculitis, vasculitis, viral vasculitis. include, etc. High sensitivity reactions [12, 17, 18]. Systemic diseases, whether infectious, genetic, autoimmune, or neoplastic, can affect the oral cavity, and early detection of oral leukemias is usually difficult, but always improves prognosis and treatment outcomes. leads to early diagnosis and treatment. 19]. Prognosis mainly depends on the affected body surface area. Healing can occur spontaneously within 2-3 weeks for small KSHE and 4-6 weeks for large KSHE [20].

In terms of treatment and management, topical treatments include antiseptics for bullous leukemia, antiseptic mouthwashes, and anesthetics. Eye damage is monitored by an ophthalmologist. By applying petroleum jelly on the cheeks, healing is facilitated.

2. Research results and their discussion

In this article, we present a case of KSHE in a 17-year-old male patient with oral leukemia confirmed positive for SARS-CoV-2 by reverse transcriptase polymerase chain reaction (RT-PCR) amplification of viral RNA. This patient has been diagnosed with COVID-19; experienced fever, cough, headache, muscle pain, loss of taste and smell. He was prescribed penicillin, acetaminophen, and the anticoagulant nadroparin. He was treated in an outpatient setting under quarantine.

Oral hygiene was very poor due to the pain associated with mucosal damage. Bilateral submandibular lymph nodes are enlarged and painful.

After she was diagnosed with COVID-19, her treatment was managed by an infectious disease specialist and included antibiotic therapy with penicillin and anticoagulant therapy with fraxiparin, 0.4 ml injection (nadroparin calcium) (once daily for 7 days times 0.4 ml) is included. On the day he entered our clinic, his D-dimer level was 0.850 ng/ml FEU (control: <0.500 ng/ml FEU), 2 weeks later, and his D-dimer level was within the normal range of 0.495 ng/ml. FEU. The skin changes were noted 7 days after the confirmation of COVID-19, and the skin changes were in remission on the day of the clinic visit because of the oral changes.

Laboratory examination revealed a moderate increase in white blood cell (WBC) count, C-reactive protein, erythrocyte sedimentation rate, and D-dimer level. Leukocytes 11.51 (reference 10 μ l), C-reactive protein 7.2 mg/l (mg/l), erythrocyte sedimentation rate 16/32 mm/h (reference 3-15 mm/hour), D-level dimer 0.850 μ g / ml PMT (μ g / ml PMT). Examination of the mucous membrane of the oral cavity and the back surface of the tongue did not reveal bacterial or mycotic pathogens.

The patient was given topical antiseptic treatment for bullous leukemia. Local treatment is applied with wet gauze and an antiseptic mouthwash (0.2% chlorhexidine solution twice a day for 14 days). Systemic corticosteroids, vitamins (complex C, B) and topical tablets (panthenol-calcium with

pantothenic acid) were also prescribed to stimulate epithelialization and regeneration of the oral mucosa. The patient was instructed on proper oral hygiene. The crusts on the cheeks were moistened with 0.9% sodium chloride solution until they were removed without bleeding. The patient had several complaints such as severe pain in the mouth, loss of appetite, inability to eat or speak, a burning sensation in the mouth, fatigue, and occasional bleeding from the mouth.

Anamnesis was collected in our clinic, extra-oral and intra-oral examinations were conducted. The patient's lips and surrounding oral mucosa were bright red. Bullous and erosive-erythematous lesions covering the lips caused severe erosion. There were vesiculobullous/macular lesions on the oral mucosa, and the clinical picture consisted of KSHE-like lesions. When he came to our clinic, there were no pulmonary symptoms such as cough, shortness of breath, but the patient had many dark red, purple maculo-papular lesions in his abdomen. He did not complain of skin changes. Lung mucous bubbles ruptured, the surface was covered with thick white or yellow exudate, bloody crusted wounds were observed. The wounds were painful. The lesions were mostly associated with areas of poor oral hygiene. During the clinical examination, an increase in saliva was noted, which, according to the patient, was occasionally accompanied by an admixture of blood.



Oral lesions are not directly caused by SARS-CoV-2 infection, but appear secondary to the patient's immune response. Further studies are needed to evaluate whether these leukaemias are related to the virus, the drugs used to treat the infection, or other conditions. The epithelium of the oral mucosa is a complex barrier structure with many functions; therefore, it can react to various microorganisms and their toxins, mechanical effects and other exogenous factors [21]. Oral CSHE caused by drugs such as penicillin is rare and accounts for less than 10% [22]. Although the first outbreak of drug-induced KSHE was limited to the oral mucosa, subsequent changes may lead to more severe types of KSHE affecting their skin [23]. Penicillin-induced CESH was not considered because the patient had no adverse reactions related to penicillin administration, the patient's lesions started on the skin and

progressed to the oral mucosa, and the penicillin treatment ended a week before sending. Bapst et al [24] reported the first case of CSHE in a pediatric patient with multisystem inflammatory syndrome in children (MIS-C) transiently associated with COVID-19. (25)

In the early stages of COVID-19, the appearance of oral leukemia can be an early sign of peripheral thrombosis, which indicates the transition of the disease to a serious stage. This means that anticoagulant therapy should be started as early as possible [26] D-dimer levels are usually elevated in patients infected with SARS-CoV-2. Significantly higher levels are found in critically ill patients and can be used as a predictive marker of in-hospital mortality [27].

This clinical case may deepen the understanding of the oral manifestations associated with COVID-19.

4. Summary

Oral clinical examination should be a standard part of the protocol for patients with confirmed SARS-CoV-2 infection. However, further studies are needed to determine whether SARS-CoV-2 infection is a cause or a predisposing factor for the development of oral symptoms and leukemia.

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