Case report

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Post-COVID-19 presentation of black hairy tongue

COVID-19 enfeksiyonu sonrasında gelişen siyah kıllı dil

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Abstract

Since the COVID-19 pandemic started in 2019, the involvement of the oral mucosa is observed in many patients, the tongue being the most affected area. In the recent literature, there is a wide range of lesions reported such as enanthema, Kawasaki-like disease, oral ulcers, and atrophic glossitis. This paper addresses a black hairy tongue case in a 47-year-old woman presenting after two weeks of COVID-19 infection. The patient was responsive to topical retinoid therapy.

Key words: *Black hairy tongue, COVID-19, SARS-CoV-2, oral lesions, oral conditions*

Öz

2019 yılında COVID-19 pandemisi başladığından beri, en çok etkilenen bölge dil olmak üzere birçok hastada oral mukoza tutulumu gözlenmektedir. Yakın dönem literatürde, enantem, Kawasaki benzeri hastalık, oral ülserler ve atrofik glossit gibi çok çeşitli lezyonlar bildirilmiştir. Bu makale, iki haftalık COVID-19 enfeksiyonundan sonra başvuran 47 yaşındaki bir kadındaki siyah kıllı dil olgusunu ele almaktadır. Hasta topikal retinoid tedavisine yanıt vermiştir.

Anahtar kelimeler: *Siyah kıllı dil, COVID-19, SARS-CoV-2, oral lezyonlar, oral durumlar*

Introduction

After the onset of the COVID-19 pandemic, many patients with oral manifestations have been reported.[1,2] The most common findings are Kawasaki-like syndrome, oral ulcers including aphthous, hemorrhagic, and necrotic ulcers. Dysgeusia is another symptom frequently reported in patients with COVID-19 infection. Rare manifestations include reddish macules, pustular enanthema, loss of dermal papilla and white hairy tongue.[3,4] We have recently encountered a patient who developed a black hairy tongue (BHT) after a COVID-19 infection. The treatment was resistant to topical antiseptics, and systemic and topical antifungal therapy. Lesions resolved two weeks after treatment with tongue brushing daily with topical tretinoin cream.

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Case report

A 47-year-old female was referred to the dermatology clinic with dysgeusia and discoloration of the tongue for three months (Fig. 1). Her complaints started after she had a COVID-19 infection two weeks ago. Her diagnosis was confirmed with an RT-PCR test. The medical history was insignificant, and the patient was a non-smoker. Physical examination revealed a thickened brown lesion on the dorsum of the tongue accompanied by a yellowish discoloration. Complete blood count was normal, anti-HIV ELISA and VDRL test were negative. She had previously used fluconazole 200 mg orally twice in a week combined nystatin oral suspension and chlorhexidin mouthwash for one month, however the lesion was not resolved after this treatment. Later, she was treated with oral tretinoin cream daily and was advised tongue brushing. Consequently, her lesion disappeared after two weeks.

Fig. 1. Thickened brown-yellow discoloration on the dorsum of the tongue

Discussion

BHT is a disease characterized by the papillary appearance of the tongue with black to yellow discoloration, mostly associated with poor oral hygiene, smoking, hyposalivation, infection and medications such as antibiotics and antipsychotics.[5] Interrupted desquamation and consequent hyperkeratosis of papillae of the tongue give a "hairy" character, along with black-brown color caused by modified oral microbiota. It is generally asymptomatic; however, nausea, altered taste sensation and halitosis can accompany it in some cases. For the management, the first-line treatment is to eliminate provoking agents and focus on oral hygiene. Second-line treatment options include antifungals, retinoids, antibiotics, topical urea solution, trichloroacetic acid, salicylic acid, and thymol.[5]

Predisposing factors for the development of the wide range of oral lesions reported in COVID-19 infected patients include hyposalivation, compromised immune system, and medications used in the treatment of COVID-19.[6] Besides, there can be opportunistic infections such as *Candida albicans*, causing ulcers.[7] The proposed mechanism for oral involvement in COVID-19 infections is via angiotensin converting enzyme 2(ACE2) receptors. There are numerous ACE2 receptors in the epithelium of the oral cavity and the SARS-CoV-2 virus binds these receptors, therefore the oral cavity is a significant involvement site causing various lesions during infection.[8] Diminished or altered taste sensation also can be linked to this phenomenon.[8] Additionally, according to Diaz Rodriguez et al, physical stress and immunosuppression are associated with oral involvement severity in COVID-19 infections. Another study by Ganesan et al, found a significant correlation between oral involvement and disease severity.[8]

To our knowledge, there are no cases in the literature reporting the co-occurrence of BHT and COVID-19 infection. This can be due to underdiagnosis of BHT since it is mostly an asymptomatic condition, and it possibly spontaneously resolves after a period following COVID-19 infection. Additionally, oral exami-

nation and even physical examination are not required for every mild course patient considering the high-risk contagiousness of COVID-19 infection. This persistent BHT in a patient developed after COVID-19 infection resolved with a short course application of tretinoin cream and tongue brushing.

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References

1. Erbas GS, Botsali A, Erden N, et al. COVID-19-related oral mucosa lesions among confirmed SARS-CoV-2 patients: a systematic review. Int J Dermatol 2022;61:20-32.
2. Amorim Dos Santos J, Normando AGC, Carvalho da Silva RL, et al. Oral manifestations in patients with COVID-19: a living systematic review. J Dent Res 2021;100:141-54.
3. Glavina A, Biocina-Lukenda D, Mravak-Stipetic M, Markeljevic J. Oral symptoms and lesions in SARS-CoV-2-positive patient. Oral Dis 2022;28:979-80.
4. Diaz RR, Remis GL. Oral manifestations in collagen diseases. Rev Esc Odontol Tucuman 1973;0:33-44.
5. Schlager E, St Claire C, Ashack K, Khachemoune A. Black hairy tongue: predisposing factors, diagnosis, and treatment. Am J Clin Dermatol 2017;18:563-9.
6. Mohseni Afshar Z, Barary M, Ebrahimpour S, et al. Pathophysiology and management of tongue involvement in COVID-19 patients. Indian J Otolaryngol Head Neck Surg 2022:6;1-4.
7. Ahmed N, Mahmood MS, Ullah MA, et al. COVID-19-associated candidiasis: possible patho-mechanism, predisposing factors, and prevention strategies. Curr Microbiol 2022;79:127.
8. Ganesan A, Kumar S, Kaur A, et al. Oral manifestations of COVID-19 infection: an analytical cross-sectional study. J Maxillofac Oral Surg 2022 Feb 5;1-10. doi: 10.1007/s12663-021-01679-x.