



## Drug-Induced Black Hairy Tongue: A Case Report

İlacı Bağlı Siyah Kıllı Dil: Olgu Sunumu

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### ABSTRACT

Black hairy tongue is a commonly observed condition of defective desquamation of the filiform papillae. The color of the elongated papillae varies from yellowish white to brown or black. A 22-years-old female presented to the department with complaints of painful, black discoloration of her tongue. Her history revealed that she had been taking doxycycline and rifampin for brucellosis. An anti-inflammatory mouthwash was administered, and the brucellosis treatment was continued. Her tongue had healed completely one month later. When doxycycline and rifampin therapy are given, the possibility of black tongue should be kept in mind. Drug discontinuation may not be necessary.

**Key words:** Black hairy tongue, doxycycline, rifampin.

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### ÖZET

Siyah kıllı dil, sıklıkla filiform papillaların defektif dökülmesinin gözleendiği bir durumdur. Uzamış papillanın rengi sarımsı beyazdan kahverengi siyaha kadar değişir. Yirmi iki yaşında kadın, kliniğe dil üzerinde ağrılı ve siyah renk değişikliği şikayetiyle başvurdu. Bruselloz nedeniyle doksisisiklin ve rifampisin kullanma öyküsü vardı. Antiinflatuvar bir gargara verildi ve tedavisine devam edildi. Bir ay sonra dili tamamen iyileşti. Doksisisiklin ve rifampisin verildiğinde siyah dil açısından uyanık olunmalıdır. İlaç kesilmesi gerekmez.

**Anahtar kelimeler:** Siyah kıllı dil, doksisisiklin, rifampisin

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## INTRODUCTION

Black hairy tongue, also known as *lingua villosa nigra*, is a painless, benign clinical condition caused by defective desquamation and reactive hypertrophy of the filiform papillae of the tongue. The hairy appearance is due to elongation of keratinized filiform papillae<sup>[1]</sup>. Its estimated prevalence in a large series of Turkish dental outpatients is as high as 23.7%<sup>[2]</sup>. The exact pathogenesis is unclear. The etiology of this condition is due most commonly to the side effects of certain drugs, including antibiotics, antihypertensives, psychotropics, and oxygenating oral mouth rinses<sup>[3]</sup>. Herein, a case of drug-induced black hairy tongue is presented.

## CASE REPORTS

A 22-years-old female presented with painful, black discoloration of the tongue, which she noticed several days before. She had been taking doxycycline and rifampicin due to brucellosis for 10 days. She had no history of using another drug or medication or of smoking. The physical examination revealed black discoloration of the tongue that appeared as elongation of the filiform papillae on the dorsal surface (Figure 1), but was otherwise normal. Culture of the tongue surface and Gram staining were negative for yeast. A nystatin mouthwash and anti-inflammatory agent was given for seven days. We recommended the patient to brush her tongue and rinse with the mouthwash. The treatment for brucellosis was completed in six weeks. The black discoloration of the tongue and papillary hypertrophy had resolved completely one month later (Figure 2).

## DISCUSSION

Excessive growth of chromogenic bacteria and fungi and desquamating keratin may contribute to the dark discoloration. Precipitating factors include poor oral hygiene, use of the antipsychotic drug olanzapine or of a broad-spectrum antibiotic such as erythromycin, and therapeutic radiation to the head and neck<sup>[3,4]</sup>. Doxycycline and rifampin had been administered to the patient for brucellosis.

Rifamycins are associated with many adverse reactions, including cutaneous reactions, gastrointestinal symptoms, hepatotoxicity, hemolytic anemia, antibody-mediated thrombocytopenia, acute renal failure, lupus-like syndrome, and orange-red discoloration of body fluids<sup>[4]</sup>. However, hematologic toxicity, neurotoxicity, superinfection, hepatotoxicity, gray/yellow discoloration of the teeth, tongue discoloration, hypersensitivity reactions, and photosensitivity occur with tetracyclines, including doxycycline<sup>[5]</sup>.

The diagnosis is based on elongated filiform papillae on the dorsal surface of the tongue<sup>[1]</sup>. Cultures may be taken to rule out a superimposed oral candidiasis or other suspected oral infection. In this patient, the obtained culture of the tongue surface and Gram staining were negative for yeast.

Although patients may be alarmed, black hairy tongue is completely harmless. In most cases, it does not require drugs for treatment. Empirical approaches include brushing or scraping the tongue and improving oral hygiene. Elimination of any incriminating factors is usually sufficient to treat the lesions<sup>[1]</sup>. Although doxyc-

**Figure 1**

The appearance of black hairy tongue on the posterior and middle dorsal surface of the tongue.



**Figure 2**

One month later, black discoloration of the tongue and papillary hypertrophy had resolved completely.



ycline and rifampin were continued in this patient, discoloration of the tongue had resolved completely after one month with brushing of the tongue and rinsing with mouthwash.

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