

Hairy tongue secondary to antibiotic usage

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ABSTRACT

Hairy tongue, also known as black hairy tongue, is a non-malignant disorder characterized by the enlargement of the filiform papillae, resulting in a velvety appearance on the surface of the tongue. The elongated papillae exhibit a range of coloration, spanning from a yellowish white hue to shades of brown to black. The precise cause of this illness remains uncertain; nevertheless, it has been linked to many predisposing factors, including extensive tobacco use, inadequate oral hygiene practices, the administration of topical or systemic antibiotics, and other related disorders. In this case report, we describe the clinical presentation of a 27-year-old patient who was diagnosed with hairy tongue as a result of antibiotic use. In addition to that, we provide a concise summary of the ailment.

Keywords: Antibiotics, brown discoloration of the tongue, hairy tongue

CASE

A 27-year-old female patient presented to our polyclinic with symptoms including halitosis, a metallic taste, and tongue discoloration. During the course of her medical history, she had a persistent infection of the hepatitis B virus without necessitating any kind of therapeutic intervention. Two weeks ago, the patient was prescribed antibiotic therapy for dyspepsia and a *Helicobacter pylori* infection. A sequential regimen was given to the patient, consisting of the following medications: during the first week, pantoprazole 40 mg was twice daily, amoxicillin 1000 mg twice daily; in the second week, pantoprazole 40 mg and clarithromycin 500 mg twice daily, metronidazole 500 mg three times daily. On the last day of the therapy, the patient began experiencing symptoms. A brown discoloration with a hairy look was seen on the dorsal surface of the tongue (Figure). The patient had a comprehensive evaluation, which revealed no abnormalities during systemic assessment. The laboratory results indicated no abnormalities. The swab culture yielded no results for the presence of any specific pathogen. The diagnosis of hairy tongue was attributed to the recent use of antibiotics, based on the available evidence. The administration of medications was ceased, and a gentle brushing of the tongue was advised. The lesion had disappeared after a two-week period.

DISCUSSION

The complete understanding of the pathophysiology of hairy tongue remains elusive. The condition is believed to originate from impaired desquamation of the lingual dorsal surface.



Figure. (a) Brown discoloration on the dorsal surface of the tongue. (b) Hair-like coating on the dorsum of the tongue (red arrows)

Consequently, it impedes the process of regular debridement, resulting in the buildup of keratinized layers. Typically measuring less than 1 mm in length, the elongated papillae have the potential to extend up to a length of 12-18 mm and a width of 2 mm. The appearance of abnormally hypertrophied and elongated filiform papillae characterizes the acquired, benign condition known as “hairy tongue.” The misconception behind the term stems from the fact that traditionally, this growth has been depicted as a black, hairy carpet-like outgrowth on the tongue. Hairy tongue may manifest with various pigmentation patterns, including brown, yellow,

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green, blue, or even unpigmented. Inadequate dental hygiene, a variety of diseases, drugs, and medicines are believed to be potential etiological contributors of hairy tongue.^{1,2} Hairy tongue has been documented as a potential adverse effect of several medications, including antipsychotics, methyl dopa, lansoprazole, interferon, antidepressants, antineoplastics, and antibiotics such as cephalosporins, penicillins, tetracyclines, clarithromycin, and linezolid.³ Hairy tongue often does not exhibit symptoms; however, some individuals may experience nausea, loss of taste, halitosis, or a burning or tingling sensation in the tongue. Nevertheless, the primary concern for patients is the negative impact on their aesthetic appearance. In the realm of management, the first course of action is the elimination of inciting factors and the prioritization of dental cleanliness. Additional therapy options for second-line management include antifungal agents, retinoids, antibiotics, topical urea solution, trichloroacetic acid, salicylic acid, and thymol.⁴ The use of antibiotics for the treatment of *Helicobacter pylori* was shown to be the causative factor in our case. After using conservative treatment strategies, the condition completely resolved over a span of two weeks.

CONCLUSION

A hairy tongue is a benign condition that may be a sign of underlying diseases, inadequate dental hygiene, or a side effect of different drugs. Often asymptomatic, it may cause halitosis, nausea, loss of taste, burning, or tingling sensations in the tongue. It will be quickly resolved after eliminating the contributing factor.

ETHICAL DECLARATIONS

Informed Consent

The patient signed and free and informed consent form.

Referee Evaluation Process

Externally peer-reviewed.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

Financial Disclosure

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Author Contributions

All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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