

# The Clinical Picture

## Black hairy tongue

**A** 71-YEAR-OLD MAN PRESENTS for evaluation of an asymptomatic black discoloration of the tongue that he noticed several days earlier. The tongue does not itch or hurt, and the patient is otherwise well, although he is concerned about potential malignancy.

He has a history of hypertension, hyperuricemia, and type 2 diabetes treated with oral glucose-lowering drugs, and he has had no recent changes in his medications. He drinks coffee and uses tobacco. His oral hygiene is poor, with intense halitosis.

Physical examination shows a black coloration of the tongue that appears as an elongation of the filiform papillae on the dorsal surface, with no other abnormalities (FIGURE 1). The physical examination is otherwise normal. Culture of the dorsal surface of the tongue shows no bacterial or fungal overgrowth.

**Q:** What is the most likely diagnosis?

- ☐ Oral leukoplakia
- ☐ Epidermoid carcinoma of the tongue
- ☐ Malignant melanoma of the tongue
- ☐ Mucosal candidiasis
- ☐ Black hairy tongue

**A:** Black hairy tongue is correct. A simple treatment consisting of brushing the tongue daily with a soft toothbrush enhanced by previous application of 30% urea is recommended to the patient, and the discoloration resolves completely within 4 weeks. He is educated on correct oral hygiene and discontinues smoking, with no clinical relapses after 2 years of follow-up.

### THE CAUSES AND THE COURSE

Black hairy tongue, also known as *lingua villosa nigra*, is a painless, benign disorder caused by defective desquamation and reactive hypertrophy of the filiform papillae of the tongue. The hairy appearance is due to

doi:10.3949/ccjm.75a.08023



**FIGURE 1.** Elongation of the filiform papillae with a blackish discoloration on the dorsal surface of the tongue.

elongation of keratinized filiform papillae, which may have different colors, varying from white to yellowish brown to black depending on extrinsic factors (eg, tobacco, coffee, tea, food) and intrinsic factors (ie, chromogenic organisms in normal flora).<sup>1</sup>

The exact pathogenesis is unclear. Precipitating factors include poor oral hygiene, use of the antipsychotic drug olanzapine<sup>1</sup> (Zyprexa) or a broad-spectrum antibiotic such as erythromycin,<sup>2</sup> and therapeutic radiation of the head and the neck. Tobacco use and drinking coffee and tea are also contributory factors. Neurologic conditions such as trigeminal neuropathy may be associated.<sup>3</sup> Manabe et al<sup>4</sup> applied a panel of antikeratin probes, showing that defective desquamation of the cells in the central column of filiform papillae resulted in the formation of highly elongated, cornified spines or “hairs”—the hallmark of *lingua villosa nigra*.

### PRESENTATION AND DIAGNOSIS

Black hairy tongue is usually asymptomatic. However, symptoms such as altered (metallic) taste, nausea, or halitosis may be noted. Most patients with hairy

tongue drink coffee or tea, often in addition to tobacco use.

The diagnosis is based on filiform papillae that are elongated more than 3 mm on the dorsal surface of the tongue. Cultures may be taken to rule out a superimposed oral candidiasis or other suspected oral infection.

### MANAGEMENT

Although frightening to the patient, black hairy tongue is completely harmless. In most cases, treatment does not require drugs. If fungal overgrowth is present, a topical antifungal can be used when the condition is symptomatic.

Empirical approaches such as brushing or scraping the tongue, improving oral hygiene, and eliminating potential offending factors (eg, tobacco, candies, strong mouthwashes, antibiotics) is usually sufficient to resolve the lesions.<sup>5</sup>

In our experience, educating the patient

about proper oral hygiene (including discontinuing smoking) and encouraging routine tongue brushing are the best preventive and therapeutic measures. ■

### REFERENCES

1. **Tamam L, Annagur BB.** Black hairy tongue associated with olanzapine treatment: a case report. *Mt Sinai J Med* 2006; 73:891–894.
2. **Pigatto PD, Spadari F, Meroni L, Guzzi G.** Black hairy tongue associated with long-term oral erythromycin use. *J Eur Acad Dermatol Venereol* 2008; 22:1269–1270.
3. **Chesire WP.** Unilateral black hairy tongue in trigeminal neuralgia. *Headache* 2004; 44:908–910.
4. **Manabe M, Lim HW, Winzer M, Loomis CA.** Architectural organization of filiform papillae in normal and black hairy tongue epithelium: dissection of differentiation pathways in a complex human epithelium according to their patterns of keratin expression. *Arch Dermatol* 1999; 135:177–181.
5. **Sarti GM, Haddy RI, Schaffer D, Kihm J.** Black hairy tongue. *Am Fam Physician* 1990; 41:1751–1755.

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