

## Black Hairy Tongue

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A 62-year-old man, known for alcohol and tobacco abuse, was diagnosed with laryngeal squamous cell carcinoma in 2008. He underwent curative radiotherapy (70 Gy), delivered to the laryngeal and oropharyngeal area as well as the neck. Follow-up 4 months after this treatment showed recurrence, for which we performed total laryngectomy and bilateral neck dissection.

Eight months after surgery he was doing well and presented no recurrence, but physical examination showed thick black hairy lesions on the back of his tongue (Figure). These lesions had appeared and quickly evolved 4 weeks before the consultation, with no associated symptoms such as pain, dysphagia, or dysgeusia. The patient had not received antibiotics in the last months. Bacterial and fungal cultures of tongue swab were negative. Basic blood tests showed no particularity. Thus, we diagnosed the patient with black hairy tongue.

He was sent to the dentist to improve his oral hygiene, and we recommended brushing the tongue with a toothbrush several times a day. He continued consuming excessive amounts of red wine, and even though there was some improvement, the lesions were not completely resolved after 6 months.

This case illustrates black hairy tongue, a condition due to the accumulation of keratin on the filiform papillae of the tongue, in a patient presenting several predisposing factors: alcohol abuse, a history of smoking, poor oral hygiene, and status after radiation therapy. Other predisposing factors for this condition are poor feeding, oral infections, and drugs such as bismuth, tetracycline, linezolid, and olanzapine.<sup>1,2</sup>

Black hairy tongue, or *lingua villosa nigra*, presents as a black coating on the tongue's dorsum, anterior to the circumvallate papillae. Usually it does not affect the tip or the sides of the tongue, and it represents a particular form of a



Figure Black hairy tongue, poor oral hygiene.

wider condition called hairy tongue, for which other colorations have been described (brown, yellow, and green). Most often asymptomatic, its principal associated problem is of aesthetic order. The main differential diagnosis of hairy tongue consists of some forms of acanthosis nigricans (which usually involves the lips), hairy oral leukoplakia (white lesions), and black staining over a normal tongue (bismuth, food colorings).<sup>3</sup>

Hairy tongue represents a common benign disorder. Its estimated prevalence in a large series of Turkish dental outpatients is as high as 23.7% (17.8% in men, 5.9% in women).<sup>4</sup> Geographic location seems to play an important role in the global prevalence of tongue lesions, and thus of hairy tongue. As an example, hairy tongue was found as being a very rare condition in a group of American schoolchildren,<sup>5</sup> while it was relatively common in a young population from Finland (8.4%).<sup>6</sup> The reason behind these differences is not clearly elucidated, but oral hygiene habits and variations in the oral flora seem to be key etiologic factors.

Adult patients are most often concerned, and although black hairy tongue is rare in children, it has been described in pediatric patients as young as 2 months old.<sup>7</sup>

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Because hairy tongue is a benign and self-limiting disorder, the first therapeutic action consists of eradicating predisposing factors. Mechanical removal of the lesions, by brushing or scraping, can be very effective. Finally, some medications such as retinoids, urea solutions, and keratolytic agents can be efficiently used to treat hairy tongue.<sup>3,7</sup>

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