

Minocycline-induced black hairy tongue and skin hyperpigmentation

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DESCRIPTION

A woman in her 60s presented to our department for the first time in 3 months for the treatment of hepatitis B. On physical examination, diffuse grey hyperpigmentation was observed on her face, which had not previously been observed. On examination of her oral cavity, a brownish-black patch with prominent hair-like filiform lingual papillae covered the dorsum of the tongue, which was painful (figure 1). She had a 14-month history of postoperative chemotherapy for rectal cancer with liver metastases at another hospital. Her chemotherapy was switched to panitumumab with irinotecan and 5-fluorouracil in the last 4 months. Furthermore, she continued to receive minocycline 100 mg/day to prevent panitumumab-induced skin lesions. The patient was diagnosed with drug-induced hyperpigmentation and a black hairy tongue (BHT).

BHT is a benign reversible condition characterised by hypertrophy and elongation of filiform papillae on the surface of the tongue with black or brown discolouration. BHT can occur as a side effect of various drugs. Moreover, the association between BHT and antibiotics, such as erythromycin, doxycycline, linezolid, penicillin, minocycline and metronidazole, is well documented in the literature.^{1,2} Interestingly, there is a report that BHT was caused by erlotinib, which is an epidermal growth factor inhibitor similar to panitumumab and was administered to the patient described in this case.³ Therefore, it is uncertain whether minocycline or panitumumab was responsible for BHT in the case presented herein. However, we strongly suspected that the causative agent of BHT was minocycline because of the presence of diffuse grey pigmentation on her face, which is characteristic of minocycline-induced skin damage. Minocycline turns black when oxidised and can lead to skin discolouration.⁴ Minocycline-induced skin pigmentation is a well-documented dose-dependent side effect with an incidence ranging from 3% to 15%.⁵ In addition to minocycline discontinuation, she was switched to trifluridine and tipiracil hydrochloride plus bevacizumab combination therapy. Six weeks later, her facial pigmentation and BHT markedly improved (figure 2). In this case, the disease course suggested that it was an adverse reaction to minocycline, with a causality rating of 'probable' according to the WHO-Uppsala Monitoring Centre Scale.



Figure 1 Diffuse grey pigmentation of the face and tongue covered with brownish-black patches.

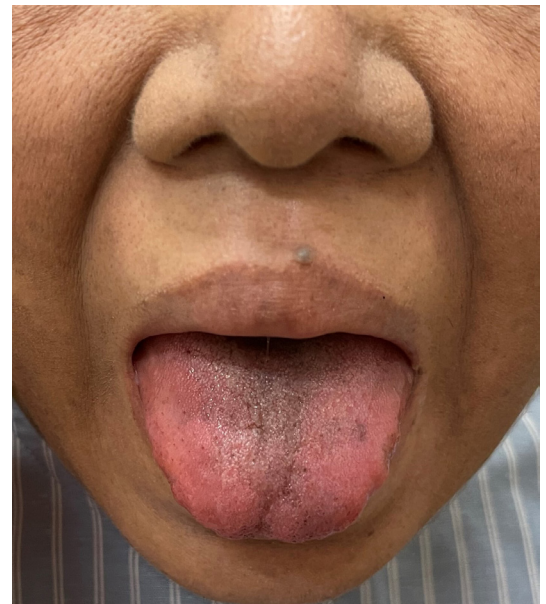


Figure 2 Facial pigmentation and tongue lesions improved after 6 weeks.

Contributors KT conceived and designed the study, acquired the data, analysed and interpreted the data, and drafted the manuscript. FH analysed and interpreted the data, drafted the manuscript and made critical revision.

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Learning points

- ▶ If the patient develops skin hyperpigmentation, check the medications taken.
- ▶ Minocycline can cause skin hyperpigmentation as well as black hairy tongue.
- ▶ Discontinuation of the causative agent may improve skin hyperpigmentation and black hairy tongue.

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Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

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