Minocycline-induced cutaneous hyperpigmentation

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An 84-year-old woman presented to an infectious disease clinic with hyperpigmented grey patches distributed symmetrically along her cheeks, chin and neck (Figure 1). The pigmentation had progressed in colour over 7 months. For the preceding 4 years, the patient had been receiving suppressive oral minocycline therapy (100 mg twice daily) for a prosthetic knee infection. We diagnosed minocycline-induced skin hyperpigmentation. The minocycline was stopped, and therapy with doxycycline was initiated. The hyperpigmentation began to fade over the following 3 months (Figure 2).

Minocycline is a tetracycline antibiotic. It has been used as a treatment for acne vulgaris and rosacea, although current Canadian guidelines do not recommend minocycline as a first-line drug for this indication.[1] Hyperpigmentation of the skin, gingiva, teeth, bones, eyes, thyroid gland and other viscera has long been recognized as a potential side effect of long-term minocycline use, with an incidence of 3%–15%.[1] There are 4 distinct types of skin pigmentation described in the literature.[2–4] Type I minocycline-induced hyperpigmentation presents as blue-black macules at the site of previous inflammation and scarring, resulting from deposition of pigmented granules in the dermis.[2,3] Patients with type II minocycline-induced hyperpigmentation develop blue-grey discolouration on healthy skin of the extremities, most often the shins. This occurs owing to deposition of minocycline metabolites in the skin.[2,3] Type III minocycline-induced hyperpigmentation presents as a muddy-brown discolouration in sun-exposed areas and may result from increased melanization of the skin basal cell layer.[2,3] Type IV minocycline-induced hyperpigmentation has the same cause as type III and involves preexisting scars.[4] Based on the distribution of the hyperpigmented patches, our patient had type III minocycline-induced hyperpigmentation. A cumulative minocycline dosage of at least 70–100 g appears to be important in the development of types II and III hyperpigmentation, whereas the relation of type I hyperpigmentation to total dosage is less clear.[2] Management consists of discontinuing the antimicrobial or the use of Q-switched lasers, although skin changes may persist, particularly with type III hyperpigmentation.[2,3] Patients taking long-term courses of minocycline should be alerted to the risk of hyperpigmentation.

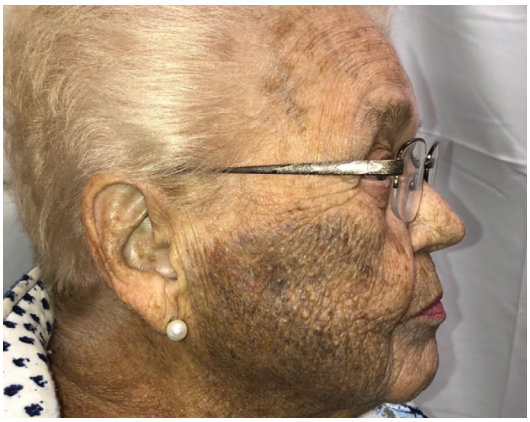

Figure 1: Minocycline-induced hyperpigmentation presenting with dark grey facial patches in an 84-year-old woman.

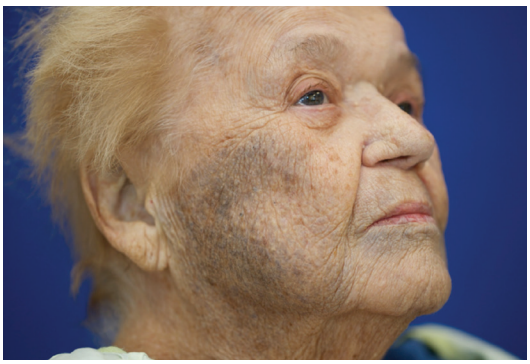

Figure 2: Partial resolution of the grey patches 3 months after discontinuation of minocycline.

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