Tennessee Medicine E-Journal

Volume 2 | Issue 2 Article 1

August 2016

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Cover Page Footnote
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Minocycline-Induced Skin Discoloration

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BACKGROUND

Minocycline belongs to tetracycline group of antibiotics and is a commonly used antibiotic for acne vulgaris. Minocycline is associated with skin hyperpigmentation, a well-documented side effect with an incidence ranging from 3%-15% [4]. Minocycline-induced hyperpigmentation (MIH) may involve nails, skin, eyes, sclerae, bone, thyroid, oral cavity, visceral tissue, heart valves and even breast milk. We report on a case of 70-year-old male with Type II minocycline-induced pigmentation as a consequence of long term minocycline therapy[1,3,4].

CASE PRESENTATION

A 70-year-old Caucasian male with a complex medical history including coronary artery disease, chronic obstructive pulmonary disease, hypertension, paroxysmal atrial fibrillation as well as previous invasive aspergillosis was seen in the Infectious Diseases clinic for an infected right heel pressure ulcer. He was afebrile. ESR was 6, CRP 21 and WBC 8,700 cells/mm^3 with 57% neutrophils. Wound culture grew Methicillin-resistant *Staphylococcus aureus.* Antibiotics based on Minocycline were started and he was seen two months later for follow-up. He was still on Minocycline and his ulcer was slowly healing. It was decided to continue Minocycline until the ulcer healed completely. On the next visit, 5 months after initial presentation, his wound was completely resolved. Interestingly, he had a significant grayish-bluish skin discoloration affecting his four limbs, primarily the forearms (figure 1). That discoloration was not present on previous visit. It was believed to be secondary to Minocycline intake.

Figure 1: Type II minocycline-induced hyperpigmentation. Blue-grey discoloration involving normal skin.

DISCUSSION

Three different variants of minocycline-induced pigmentation (MIH) have been described based on their color and tissue/site of involvement. Type I is the most common, characterized by blue-black pigmentation involving a site of inflammation, trauma or scaring; Type II is characterized by blue-gray pigmentation involving normal skin; while Type III is characterized by muddy brown pigmentation involving normal skin of sun-exposed areas[4,5]. Length of the treatment and the dosage is also a differentiating factor between different types of MIH. Type I seems to be duration- or dose-independent, while type II and type III are duration- and dose-dependent [4,5]. Type II and III patients with treatment durations of approximately 3 years or dosage exceeding 100g are at increased risk of developing MIH[1,4,5]. In most type I and type II cases, discontinuation of treatment leads to fading of the hyperpigmentation but requires months to years, while type III can persist regardless of

discontinuation[4,6] . Laser treatment with Q-switch lasers has been shown to reverse type III pigmentation, and other management includes use of high SPF sunscreen to prevent exacerbation caused by sunlight [7]. Given the potential of irreversible esthetic complications, patients must be educated regarding skin discoloration, and physicians need to be vigilant of this side-effect.

ACKNOWLEDGMENT
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