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IMAGES IN EMERGENCY MEDICINE

Toxicology

Totally blue

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1 | CASE PRESENTATION

An 88-year-old female presented to the emergency department with bradycardia and apparent cyanosis (Figure 1). Atropine 0.5 mg was administered intravenously with improvement into sinus rhythm in the range of 60–70 beats per minute. The physician noted that reported cyanosis did not correlate with oxygenation (100% on room air) or mentation. The patient's skin was blue-gray in color, and she stated it had been this way for years (Figures 1–3). Further chart review revealed that the patient had been on chronic suppressive oral minocycline 100 mg twice daily since September 2018.

FIGURE 1 Patient with minocycline exposure showing discoloration of the face, neck, and arms

2 | DIAGNOSIS

2.1 | Minocycline-induced hyperpigmentation

Minocycline is known to cause blue-gray skin discoloration via several proposed mechanisms, most commonly oxidation of the parent compound in the subcutaneous tissue.[1] The medication has a large volume of distribution compared to other tetracyclines; therefore, it is reported to have the ability to affect all areas of the skin at varying levels of exposure. Others have described minocycline discoloration ranging fromType I to III correlating with total dose ingested.[2–4] Our patient presented with a total ingested dose of over 219 g over 3 years with features representative of all 3, encompassing the entire body, with patches of the hands and ankles spared (Figures 1–3). This patient's

FIGURE 2 Patient with minocycline exposure showing discoloration of the legs and feet potentially inconsistent with sun exposure

FIGURE 3 Patient with minocycline exposure compared to the arm of Dayne Laskey, PharmD, DABAT as reference for blue/gray discoloration

presentation is inconsistent with "sun exposed" linkage; however, this could be due to the sheer magnitude of total ingested dose. Our team also located in the patient's chart that renal failure was thought to be the primary reason for hyperpigmentation and blue-gray discoloration. The team provided reeducation on the likely involvement of minocycline and potential for irreversibility.

CONFLICTS OF INTEREST

None of the authors above have any conflicts of interest related to this article

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