


Images in Rheumatology

Hydroxychloroquine-induced Hyperpigmentation

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About 10–25% of patients with systemic lupus erythematosus (SLE) managed with antimalarials will develop cutaneous hyperpigmentation, and although the majority of such cases is attributed to chloroquine, hydroxychloroquine (HCQ) is also implicated and is likely underrecognized¹.

A 52-year-old Hispanic woman with SLE and endstage renal

disease receiving peritoneal dialysis presented with a 3-month history of asymptomatic, progressive darkening of her bilateral upper extremities. There was no antecedent trauma or preceding skin eruption. She had been taking HCQ 200 mg daily for 12 years. Physical examination revealed diffuse mottled and reticular hyperpigmentation with adjacent areas of ecchymosis on

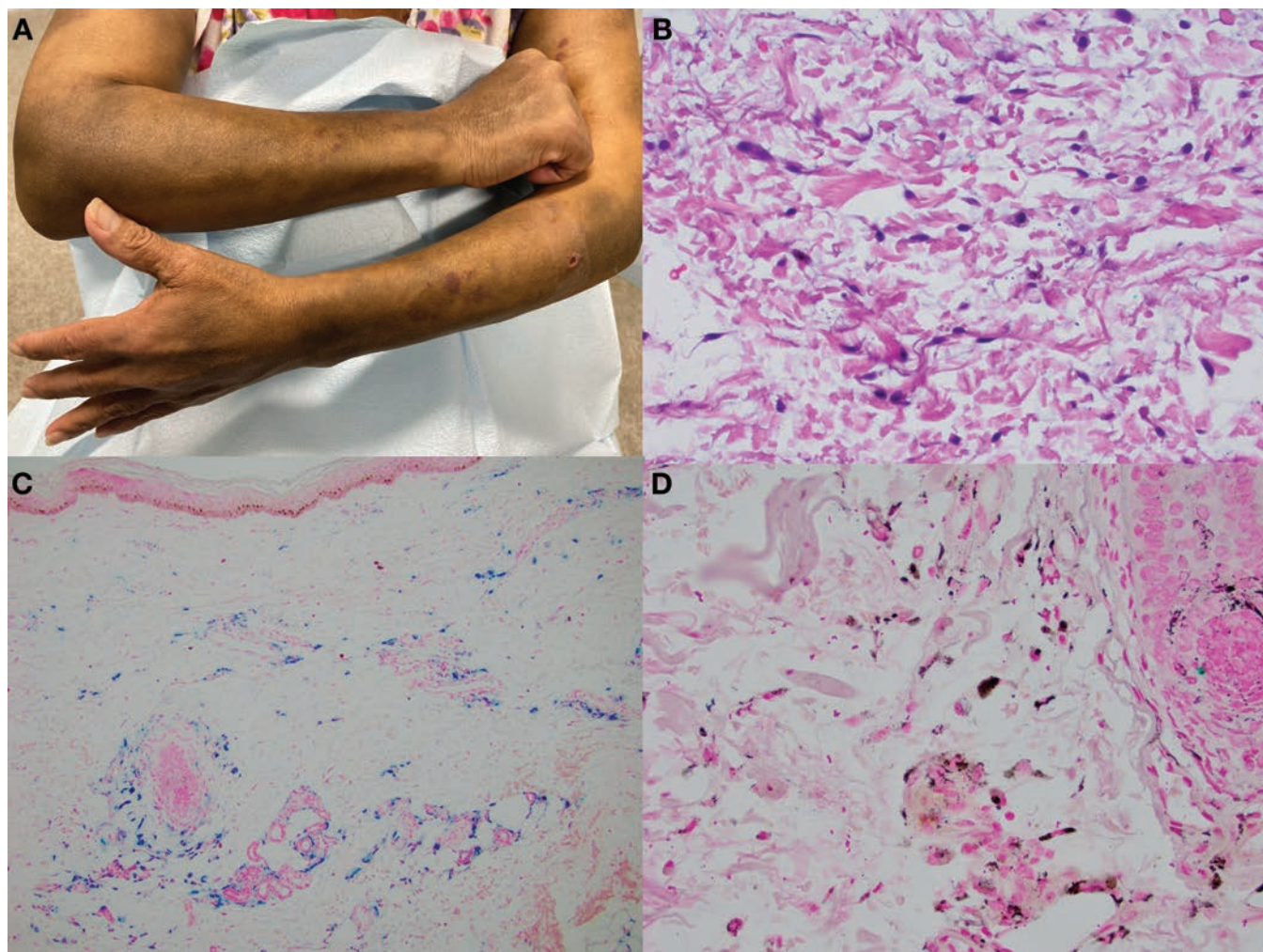


Figure 1. A. Mottled and reticular hyperpigmented patches on the arms with focal ecchymosis. B. High-magnification H&E-stained section (original magnification $\times 400$) showing scattered pigmented granules within the mid dermis, some seen within histiocytes. C–D. Perls' Prussian blue (original magnification $\times 100$) and Fontana Masson (original magnification $\times 400$) stains reveal significant iron and melanin deposits within the dermis, respectively.

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the bilateral upper extremities (Figure 1A). A biopsy revealed dermal deposits of iron and melanin (Figure 1B–D). A diagnosis of drug-induced dyschromia was made with a staining pattern compatible with that of antimalarial exposure.

Presentation on the lower legs, especially shins, is classic, but other sites may be involved including mucosa and nail beds². The pigmentation may begin within a year of treatment, but the timing of onset is variable, and contrary to HCQ-associated retinopathy, a direct association between cumulative dose or duration of therapy with the pigmentation has not been substantiated¹. The pathophysiology is not well understood, but it is thought that the pigmentation is precipitated by bruising leading to hemosiderin deposition and subsequent activation of melanocytes leading to the accumulation of melanin. This

hypothesis, however, is inadequate because it does not account for pigmentation on nontraumatic sites such as mucosa. Upon cessation of HCQ, some patients demonstrate partial improvement, and laser treatments may improve residual dyschromia³.

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