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IMAGES IN CARDIOLOGY

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Amiodarone-induced skin pigmentation: Q-switched laser therapy, an effective treatment option

A 48-year-old man had been treated with amiodarone doses of 200–400 mg daily for 3 years (total dose of 330 g). He noted the gradual development of marked facial discolouration (panel A) and believed that he had suffered from this stigmatising effect as much as from the underlying heart disease. Amiodarone treatment was discontinued, and he subsequently underwent successful “photothermolytic” treatment using the Q-switched ruby laser. Panel B shows a clear line of demarcation between the treated and non-treated Areas around the lower right cheek after several treatment sessions.

Amiodarone treatment may lead to a distinctive slate-coloured, blue-grey or purple discolouration of exposed areas to the sun in about 9% of young patients receiving long-term treatment. Factors influencing the likelihood of developing skin discolouration include young age, daily and total dosage of drugs, duration of drug treatment, the rate of amiodarone metabolism (desethylamiodarone has 2–10 times more phototoxic potential), frequency and intensity of exposure to sun and, in particular, early photosensitivity on areas exposed to light (seen in up to 57% of patients). The exact mechanisms by which amiodarone causes skin discoloration remains controversial but includes drug-induced lipodosis, a photosensitivity reaction in the ultraviolet A and to a lesser degree ultraviolet B

wavelength spectrum and, rarely, leucocytoclastic vasculitis. The Tyndall effect may explain the bluish colour noted clinically. So far, the only known treatment was discontinuation of amiodarone, but even then pigmentation can persist beyond 2 years. The clinical arrival of Q-switched lasers in dermatological practice provides for the first time a realistic treatment option. The Q-switched ruby laser uses high-energy pulses (8 J/cm²) that produce specific thermal-mediated injury to exogenous and endogenous pigment and pigment-containing cells. Q-switched laser therapy is effective in treating dermal pigmentation particularly blue-black tattoos, and also drug-induced lesions. Other laser-based treatment alternatives include the Q-switched ruby:Nd:YAG laser and the Q-switched alexandrite laser.

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