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Slate grey pigmentation due to minocycline therapy

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ABSTRACT We describe a 77-year-old man who attended our department for investigations of sideropenia who incidentally was noted to have patches of slate grey skin pigmentation. The patient had been treated for folliculitis affecting his scalp for several years with minocycline. Appearances were suggestive of minocycline-induced pigmentation. We discuss the incidence, pathogenesis, clinical appearances and treatment of minocycline-induced pigmentation and suggest that in most instances of skin infections the use of tetracyclines is preferable.

KEYWORDS Drug reaction, pigmentation, minocycline

DECLARATION OF INTERESTS No conflict of interests declared.

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CASE REPORT

A 77-year-old man attended our outpatient department for investigation of an incidental finding of borderline sideropenia. Full blood count was normal. The sideropenia was attributed to chronic bleeding due to a previously identified colonic polyp and was not further investigated.

Incidentally, during consultation, the patient was noted to have slate grey pigmented patches affecting the skin of the forehead, preauricular areas, neck, scalp, lower lips and chin. (See Figure 1.) The patient reported that they had been present for at least a few months. He had been taking minocycline for several years for folliculitis affecting his scalp. Appearances were highly suggestive of minocycline-induced pigmentation. Medication was stopped, and the patient was referred to the dermatology department.

DISCUSSION

Minocycline is widely employed for the treatment of many dermatological conditions and infections. It is well absorbed and is lipid soluble thus facilitating penetration into body fluids and tissues.[1] Minocycline degradation products together with iron, lipofuscin, melanin and calcium have been demonstrated as constituents of the pigment.[2] The incidence of cutaneous pigmentation due to minocycline has been reported to vary between 3·7% up to 14·8%. In addition, Minocycline has been reported to cause pigmentation of various tissues and body fluids including mucous membranes, nails, bones, sclerae, thyroid, brain, heart valves and breastmilk.[1–3] The pathogenesis of this pigmentation is not completely understood.

Three clinical presentations of cutaneous minocycline-induced skin pigmentation have been described.[1] Type I is characterised by blue-black macules that are localised to sites of scarring or inflammation (classically on the face within acne scars). Type II is characterised by blue-black, brown or slate-grey pigmentation on healthy skin, primarily the skin of the shins, ankles and arms. Type III presents as muddy-brown discolouration and may possibly result from a low-grade minocycline photosensitivity reaction.

Patients may display features of more than one type at a given time, and cutaneous pigmentation may also be accompanied by pigmentation involving other organs. Whereas the duration of therapy and total cumulative dose do not influence the onset of type I pigmentation, types II and III develop predominantly in patients who are treated for prolonged periods with high dosages of the drug.[1] Pigmentation tends to resolve after the drug is stopped, although this process may take many months or years.

A recent paper in the *Drug and Therapeutics Bulletin* states that there is no evidence to suggest that minocycline has any advantage over tetracyclines which are safer and less expensive.

CONCLUSION

Tetracyclines are in most instances preferable to minocycline. Patients undergoing therapy with minocycline for extended periods should be informed of this possible adverse effect and should be appropriately screened for its development. Although minocycline-induced pigmentation is not harmful, the drug should be discontinued when this adverse effect is recognised. Failure to recognise this cause of pigmentation of the skin and other tissues may lead to unnecessary investigation and confusion with other pathologies.

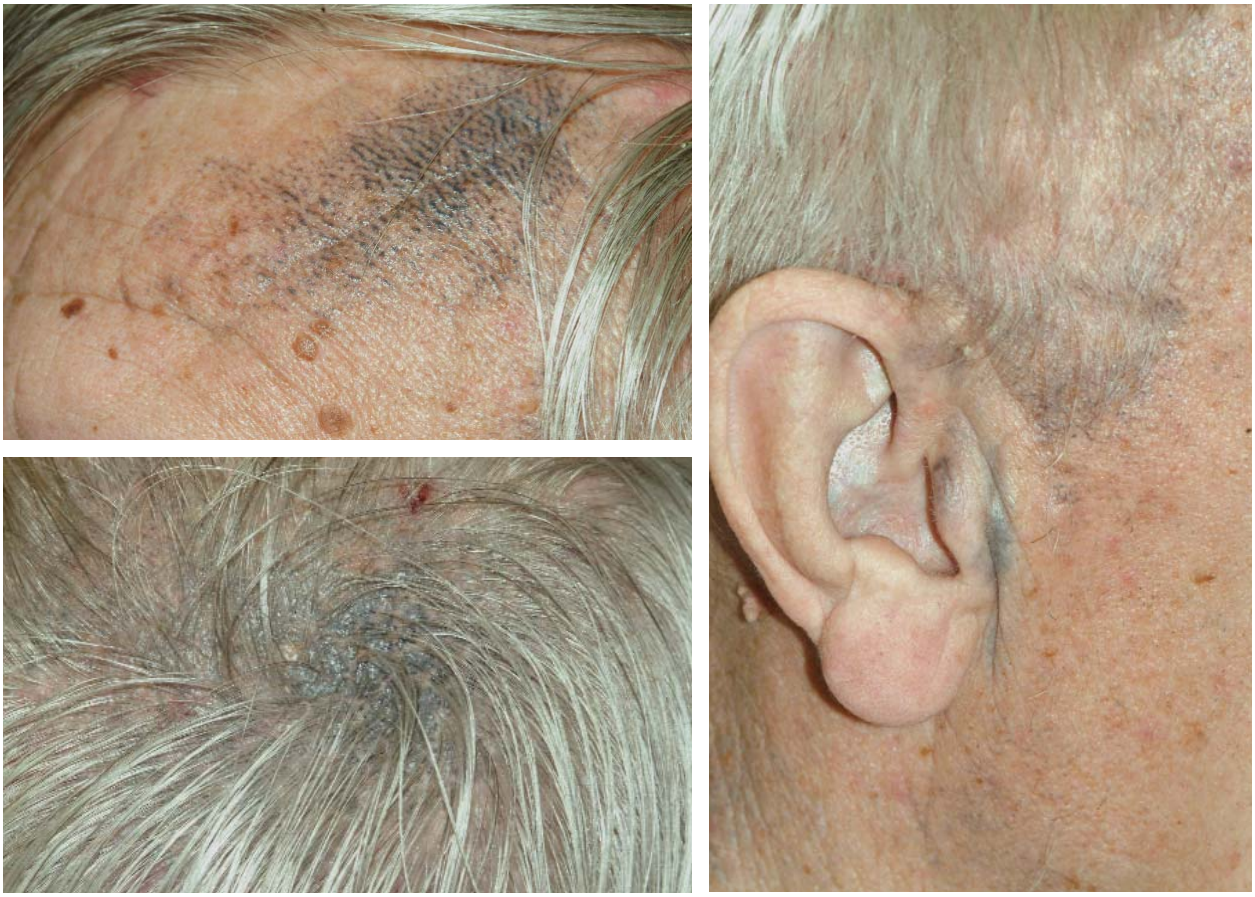

FIGURE 1 Minocycline induced pigmentation: Slate grey pigmented patches were prominent features of the skin of the forehead, preauricular area, and scalp.

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