PHOTO QUIZ

A brown-eyed woman with blue discoloration of the sclera

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CASE REPORT

A 59-year-old woman presented to the outpatient department with blue discoloration of the sclera which had been slowly progressive over the last three years. She also reported diffuse hyperpigmentation of the skin. There were no associated symptoms. She was on thyroid hormone replacement because of hypothyroidism diagnosed three years earlier. Furthermore, she had been taking oral minocycline daily as therapy for acne vulgaris for more than 20 years.

Local examination revealed bilateral blue pigmentation of the sclera (*figure 1*). The visual function was intact. Furthermore, diffuse brownish pigmentation of the skin was noticed. The routine blood investigations, including serum ferritin and TSH levels, were within normal limits.

Figure 1. *Local examination revealed bilateral blue pigmentation of the sclera*

WHAT IS YOUR DIAGNOSIS?

See page 37 for the answer to this photo quiz.

ANSWER TO PHOTO QUIZ (PAGE 33)

A BROWN-EYED WOMAN WITH BLUE DISCOLORATION OF THE SCLERA

DIAGNOSIS

Minocycline is a yellow coloured, semi-synthetic tetracycline antibiotic that turns black when oxidised. It can induce severely disfiguring discoloration of the skin, nails, oral mucosa, ear cartilage, conjunctiva, teeth, bones, thyroid gland and pigmentation of heart valves.[1,2] These side effects are associated with long-term use of this drug, for example as treatment for acne vulgaris, rosacea or rheumatoid arthritis. Minocycline-induced hyperpigmentation is thought to occur in 14.8% of patients with acne vulgaris or rosacea (median duration of treatment of 17 months) and in 41% of patients with rheumatoid arthritis after a median of 12 months.[3,4] Different patterns of hyperpigmentation of the skin can be distinguished based on histopathology: type I is characterised by blue-black discoloration in areas of previous inflammation or scarring; type II appears as blue-grey pigmentation of previously normal skin of the arms and legs; type III consists of symmetrical muddy-brown macules that is most prominent on sun-exposed areas.[1] The type of scleral deposits is not known because scleral biopsy to examine these deposits has never been performed.

The discoloration of the sclera typically is blue, but it has also been described as dark metallic blue, brownish or black.[5] It may be enhanced in light-exposed areas. Scleral hyperpigmentation is not usually an isolated manifestation and is frequently seen in combination with pigment changes as noted above. It usually resolves with discontinuation of minocycline, although resolution may take months to years, or it may be permanent.

In our case, minocycline was discontinued to prevent further pigmentation. No alternative treatment for acne was started and subsequently, five years later, there was still no improvement in the discoloration of the eyes.

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