

## Minocycline-induced scleral pigmentation

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### 1. Case report

A 64-year-old woman was referred to the uveitis eye clinic for a 7-month history of bilateral eye discoloration noted by her referring rheumatologist. On review of ocular history, she reported bilateral intermittent blurred vision and dryness, and denied ocular pain and light sensitivity. Medical history is significant for Rheumatoid Arthritis (RA) and Sjogren's Disease. She has been taking Minocycline, Plaquenil, and Sulfasalazine for more than 5 years. These medications were discontinued 5 months prior to presentation, and she was started on Rituximab infusion. On ophthalmologic examination, she had bilateral grayish-blue discoloration of the sclerae. Best corrected visual acuity, visual fields, and intraocular pressure were normal. On external eye examination, bilateral interpalpebral pigmentation was noted (Fig. 1 A). Anterior segment optical coherence tomography (AS-OCT) showed normal scleral thickness (Fig. 1 C). On general physical exam, pigmentation of pinnae of both ears, fingernails, teeth, and gums was also observed. A diagnosis of Minocycline-induced scleral pigmentation was made. The patient was reassured and informed that the pigmentation could resolve slowly or be permanent. She was scheduled for re-evaluation and had noticeable decrease in pigmentation 2 months following initial presentation (Fig. 1 B). Patient was instructed to return to regular comprehensive ophthalmologist and rheumatologist visits and re-evaluation as necessary.

### 2. Discussion

Minocycline is an antibiotic that is known to cause grayish pigmentation of the skin, conjunctiva, sclera, and retina in 3%–15% of patients.<sup>1</sup> Although minocycline-induced pigmentation doesn't affect visual function,<sup>2</sup> it is imperative to rule out systemic and sight-threatening conditions of similar presentation.<sup>3</sup> Given the

patient's past medical history of seropositive RA; we needed to rule out scleral thinning due to scleromalacia perforans, hence an AS-OCT was ordered. Other causes of scleral pigmentation include ocular disorders such as nevus of ota and systemic disorders such as osteogenesis imperfecta. Additional medications known to cause cutaneous pigmentation include amiodarone and epinephrine.

### 3. Conclusions

Pigmentation of the sclera is an unusual ocular finding. It can be related to many different ocular or systemic conditions and could be a side effect of several medications. While a detailed history and clinical examination can often make the diagnosis of minocycline-induced scleral pigmentation, other conditions should be considered, and a thorough ophthalmologic exam should be performed to rule out sight-threatening diagnoses.

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### Authorship

SAHAA wrote the manuscript. SAHAA, KJT, and SG edited and approved the final manuscript.

### Patient consent

Consent to publish this case report has been obtained from the patient in writing.

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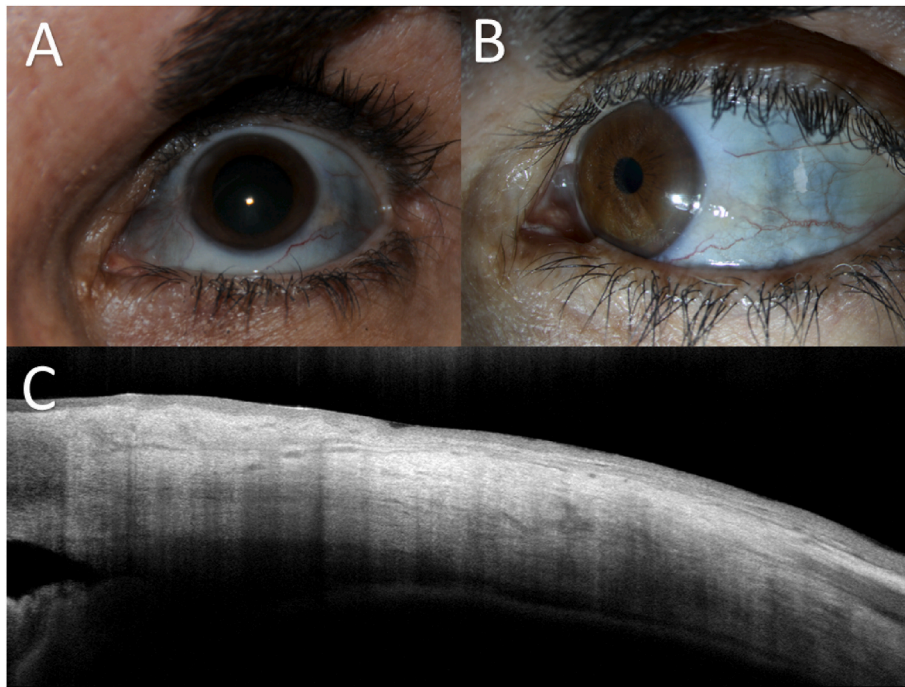
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**Fig. 1.** Minocycline-induced scleral pigmentation. Image of the left eye in primary gaze showing interpalpebral grayish scleral pigmentation and a nasal pterygium (A). Image of the left eye in right gaze showing noticeable decrease in pigmentation 2 months following initial presentation (B). Anterior segment OCT of the left eye showing normal scleral thickness (C).

#### Declaration of competing interest

We declare no competing interests.

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