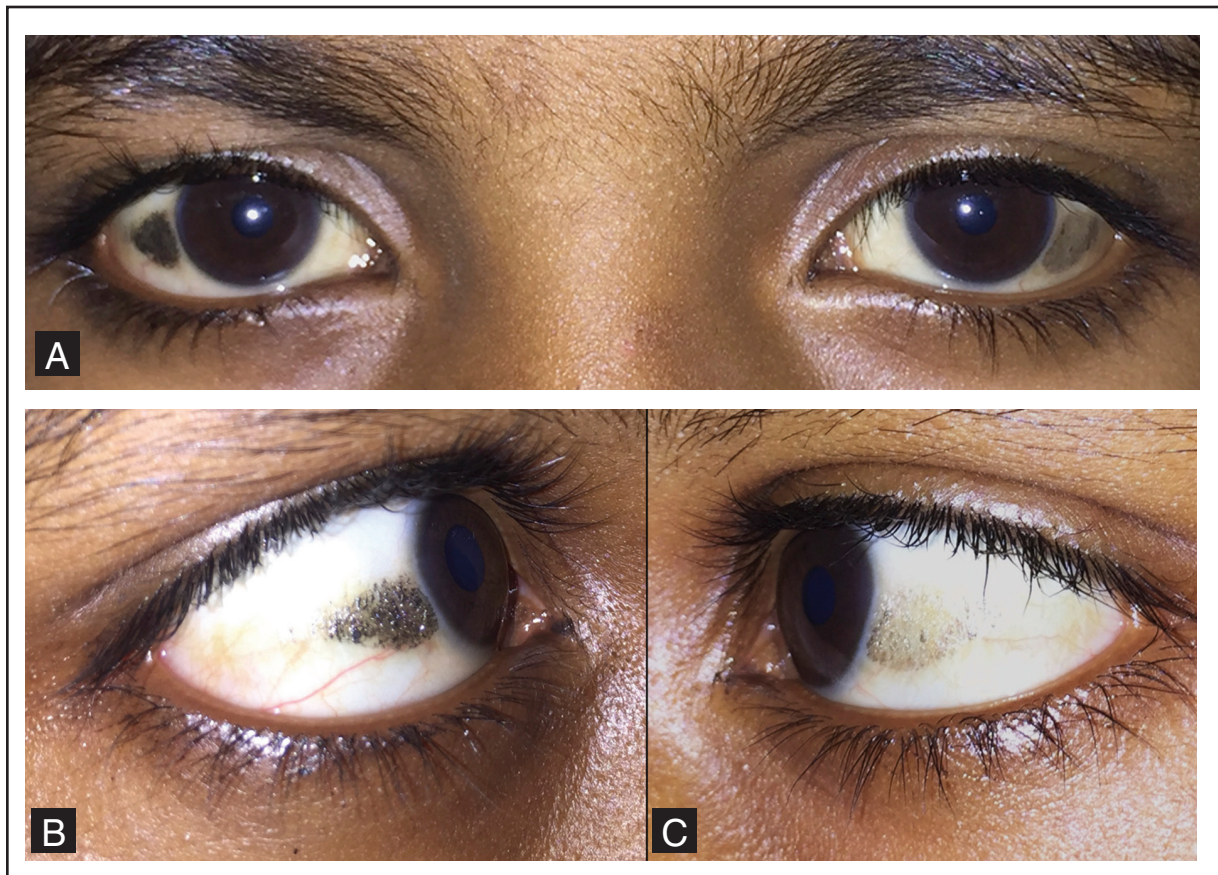


Black Dots and the Evil Eye!

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A 7-year-old girl presented to the ophthalmology department with a history of slow-growing, painless, pigmented lesions in the whites of her eyes: one lesion in each of her eyes (**Figure 1A**). Her father had first noted these a year ago and since then the lesions in both eyes increased in size gradually. Both lesions were on the temporal aspects of the conjunctiva: the right-sided lesion had a metallic shimmer and variable, scattered black pigmentation (**Figure 1B**). In comparison, the left-sided lesion was relatively hypopigmented and pale in color (**Figure 1C**). Neither lesion encroached on the cornea and no feeder vessels were seen. Best-corrected visual acuity in both eyes was 20/20, N6 and no other abnormality was noted.

What's Your Diagnosis?

For the correct answer, see page XXX

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The answer to *What's Your Diagnosis?* is Bitot's spots. On questioning further, her father confirmed that she had symptoms consistent with nyctalopia. Ophthalmic manifestations of vitamin A deficiency include xerophthalmia, corneal ulceration, retinal pigment epithelial changes, and optic atrophy. Of these, corneal and conjunctival xeroses are the most commonly reported manifestations. Bitot's spots are a pathognomonic sign of vitamin A deficiency and indicate conjunctival xerosis with a deposition of keratin in the conjunctival epithelium.¹ In India, it is common for parents to apply kohl to the eyes of children. This kohl (also called kajal) is used in the belief that it improves the eyesight, makes the eyes look better, or, as in this case, "to ward off an evil eye."² Over time, particles from homemade kajal, which consists of a variety of chemical constituents, including galena (PbS), minium (Pb₃O₄), amorphous carbon, magnetite (Fe₃O₄), and zincite (ZnO), get mixed with the tear film debris and are deposited over the irregular Bitot's spot to appear unusually pigmented.³ This may mimic pigmented tumors such as conjunctival nevus. Careful examination and detailed history often reveals the diagnosis. Gentle scraping with a cotton bud exposes the xerotic conjunctiva underneath and dietary supplementation of vitamin A reverses all ophthalmic symptoms, as was the case in our patient.

REFERENCES

1. Duignan E, Kenna P, Watson R, Fitzsimon S, Brosnahan D. Ophthalmic manifestations of vitamin A and D deficiency in two autistic teenagers: case reports and a review of the literature. *Case Rep Ophthalmol*. 2015;6:24-29.
2. Mohta A. Kajal (kohl): a dangerous cosmetic. *Oman J Ophthalmol*. 2010;3:100-101.
3. Hardy AD, Farrant AJ, Rollinson G, Barss P, Vaishnav R. A study of the chemical composition of traditional eye cosmetics ("kohls") used in Qatar and Yemen. *J Cosmet Sci*. 2008;59:399-418.