



An Unusual Corneal Foreign Body: A Case Report

KEYWORDS

corneal foreign body, Arthropod, Pseudo infestation.

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ABSTRACT *Many types of foreign bodies can enter the eye and get stuck on to the cornea ¹. We report a case of unusual corneal foreign body in a 35 year old healthy male patient, presented to eye clinic with complaints of sudden onset of ocular discomfort, foreign body sensation and watering for a couple of days. On clinical examination he was found to have a retained corneal foreign body suggestive of an arthropod. Thus a pseudo infestation can be considered as differential diagnosis of corneal foreign bodies.²*

Introduction

Corneal foreign bodies are common presentation in an eye clinic although foreign bodies of biologic origin are rare especially in healthy young individuals. Parasitic involvement of cornea due to protozoa and arthropods has been previously mentioned in the literature.³ Here we report an unusual foreign body suspected to be arthropod in nature found to be retained on the cornea causing symptoms of discomfort for a couple of days.

Case Report

A 35 year old male patient attended eye outpatient clinic with complaints of discomfort irritation and watering in his left eye for a couple days. His symptoms started after a bike ride from work to home. He was otherwise healthy and well systemically. On examination visual acuity was 20/20 each eye. Corneal sensation was normal in both eyes. Slit lamp examination revealed a smooth brownish black slightly elevated foreign body embedded in the cornea about 7 o'clock inferonasally near limbus with a vertical diameter of less than 1 mm. There was minimal infiltration in the cornea however interestingly there were tiny air bubbles seen underneath the foreign body extending beyond the limits of foreign body suggestive of decomposition due to its biologic origin. The conjunctiva was injected. The remainder of the ocular examination was unremarkable.

part was identified as arthropod under higher magnification however only recognised as some insect fragments under microscope and histology was inconclusive due to difficulty in retrieving very small and disintegrated parts of the organism.

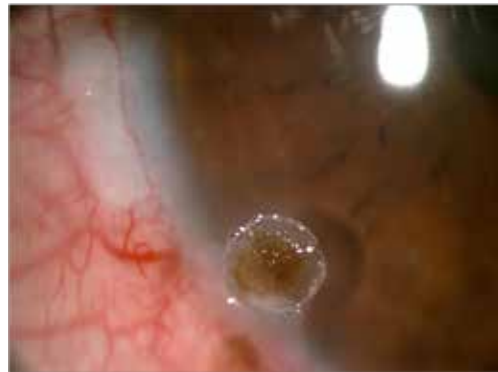


Figure 2: Higher magnification view of arthropod with surrounding air bubbles suggesting disintegration of the body

Patient was started on topical anti-inflammatory, antibiotic and anti histaminic drugs. At the follow up the corneal lesion was completely healed up in one week time without any sequel.



Figure 1: An unusual corneal foreign body of biological origin affecting left eye

The foreign body was removed under local anaesthesia leaving behind only a small epithelial defect. This removed



Figure 3: Post treatment complete healing of corneal lesion

Discussion

Accidental entry of corneal foreign bodies is common occurrence in ophthalmic practice however biologic foreign bodies are rarely found.

Tarantula and caterpillar hairs can penetrate cornea and cause keratitis or present as corneal foreign bodies but true or pseudo infestation have rarely been reported.⁴ These types are mainly related to certain occupation such as farming.⁵ Our patient was a motor bike rider and noticed his symptoms after a ride home although has no history of recent involvement in any farming activities. Clinical examination suggested a retained foreign body and the morphology made us suspect its arthropod origin.

He was a healthy young man with good understanding of hygiene. He had no issues as dandruff, head lice or any parasitic infections of the skin. A clear cut shell of arthropod was noted on the cornea. There has been report of such corneal foreign body in a child after swimming where ostracoda shell was found to be embedded on the cornea.⁶ Such foreign body may simulate prolapsed uveal tissue specially when located near limbus as in our case. Therefore a detailed ocular examination is very important to rule out any occult trauma.

The mechanism of reaction to these foreign bodies depends on nature of the foreign body and individual's immune response.⁴ In our case the patient was mildly symptomatic as the foreign body entered the eye was stuck near limbus, it would have compromised the vision if it had migrated further to the visual axis. Therefore it is necessary to remove the foreign body adequately and identify it.⁷ Unfortunately due to decomposition of the organism and lack of preservation techniques, attempt to have a detailed histopathological assessment was unsuccessful. However informal discussion was sought from microbiologist who reported it to be presumably retained head louse. Although uncommon there are several cases reported on phthiriasis palpebrae by pubic lice causing blepharocconjunctivitis and one report of corneal pseudo infestation by head louse.^{8, 2}

Conclusion

Corneal pseudo infestation by arthropod is uncommon but should be considered in the differential diagnosis of corneal foreign bodies. Awareness about identification and preservation techniques for such foreign bodies should be understood. An unusual morphology and detailed history of any occupational exposure should raise the suspicion.

REFERENCE

- 1) Anderson K, Mitra S, Salouti R, Pham TA, Taylor HR. Fungal Keratitis caused by *paecilomyces lilacinus* associated with a retained intracorneal hair. *Cornea* 2004; 23: 516-521. | 2) Seyed Farzad Mohammadi, Iraj Mobeji, Seyed Mehrdad Mohammadi, Maryam Tahvildari, Fahimeh Asadi Amoli. Head lice in cornea: clinicopathologic report of a case. *Iranian Journal of Ophthalmology* 2011; 23: 64-66. | 3) Tauber J, Jehan F. Parasitic Keratitis and conjunctivitis. In: Foster CS, Azar DT, Dohlman CH, eds. *The Cornea*, 4th edition. Philadelphia: Lippincott Williams and Wilkins, 2005; 427-46. | 4) Watts P, McPherson R, Hawksworth NR. Tarantula Keratouveitis. *Cornea* 2000; 19(3):393-4 | 5) Teoh SC, Lee JJ, Fam HB. Corneal honeybee sting. *Can J Ophthalmol* 2005; 40(4):469-71. | 6) Michael Dollin, Andre Jastrzebski, Adil Bhatti, Lane Graham, Michael D O'Connor, Seymore Brownstein. An unusual corneal limbal foreign body: Ostracoda shell. *Can. J. Ophthalmol* 2012; 47(6): e49 | 7) Chi-Ting H, Ping C, Jy-Been L. Caterpillar Setae in the deep cornea and anterior chamber. *Am J Ophthalmol* 2000; 129: 384-385. | 8) Turgut B, Kurt J, Catak O, Demir T. Phthiriasis palpebrae mimicking lid eczema and blepharitis. *J Ophthalmol* 2009; 2009:803951. |