

Acute Foreign Body Reaction And Corneal Abrasion Secondary To Impacted Human Hair In Tarsus

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Abstract

Eye injury due to foreign body is the most common cause of ocular emergency. Hair as a foreign body is very much common due to plant, pet's and caterpillars. But human hair impacted in tarsus is very rare. Our case is unique as in the way where we found a hair which is probably human in origin and was impacted in the tarsus. We initially missed the hair end but later meticulous high magnification slit lamp examination after eversion of the eyelid, we were able to locate the hair end as tiny black spot. This indicates the importance of eversion of the upper eyelid and slit lamp examination in higher magnification.

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Introduction

A number of cases of hairs of plants and of certain insects notably caterpillars burrowing into the tissues of the conjunctiva and setting up a condition resembling ophthalmia nodosa or subacute trachoma are recorded.^{1,2} Human hair as foreign body in the conjunctiva has been reported in the past by Sathe SM³. Corneal abrasion due to foreign body impacted in the conjunctiva is very common. Our case is unique in the way that acute foreign body reaction was due to human hair which got impacted in the tarsus. We initially missed the hair end but later meticulous high magnification slit lamp examination after eversion of the eyelid, we were able to locate the hair end as tiny black spot. This indicates the importance of eversion of the upper eyelid and slit lamp examination in higher magnification.

Case History

An eighteen year male patient presented with the chief complaint of watering, redness and irritation in the left eye from 2 days. Patient gave history that something fell into the eye while he was riding bike and he rubbed his eyes after that.

On examination patient's visual acuity (VA) in the right eye was 6/6 and in the left eye it was 6/12p. Slit lamp examination of the right eye was normal but in left eye bulbar and palpebral conjunctiva were congested. Cornea had linear abrasion mark all over surface, which on staining looked like linear criss cross lines all over the corneal surface (Figure 1). Initially no foreign body was found on eversion of the eyelid but the staining of cornea was suggestive of some foreign body rubbing the cornea. Further careful examination and meticulous search in the higher magnification, we found a black spot in the palpebral conjunctiva which appeared as impacted hair in the tarsus (Figure 2). This was suggestive of type 2 ophthalmia nodosa characterised by chronic keratoconjunctivitis due to impacted hair in the bulbar or palpebral conjunctiva.⁴

After instilling paracaine 0.5%, we were not able to remove the foreign body initially and furthermore when we tried to

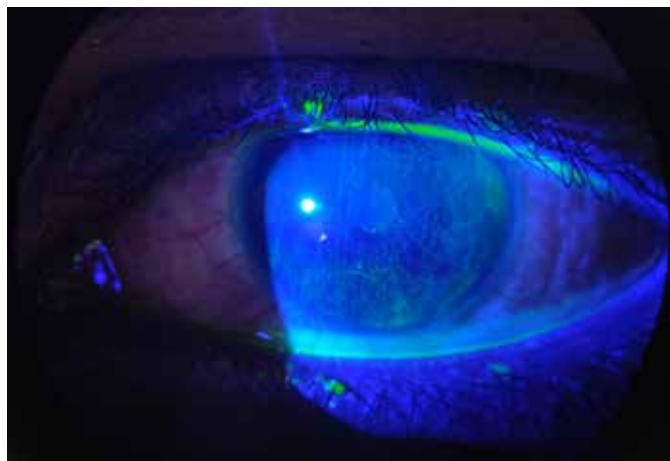


Figure 1: fluorescein staining of cornea

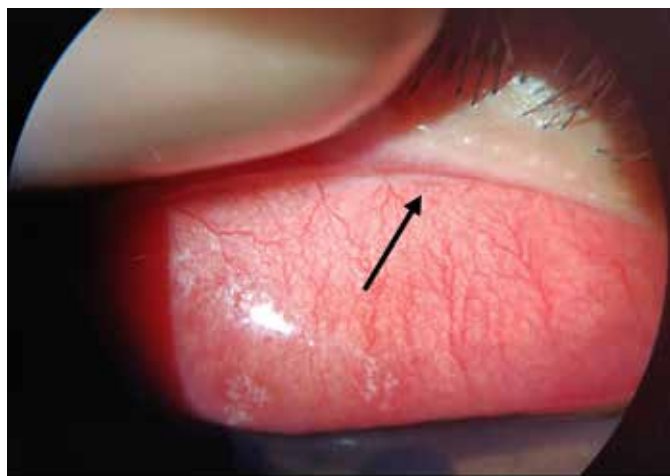


Figure 2: Impacted hair in the tarsus

catch the hair it vanished from the site. But when pressure was applied beside that spot, it came out. Later patch was applied with Moxifloxacin 0.5% w/w ointment and Hydroxypropyl Methylcellulose 2% ocular lubricating gel. Hair was examined under the microscope (Figure 3). It did

not appeared to be barbed, it had smooth outer surface and appeared to be a human hair (shape of hair goes in favour of human hair). Since human hair can only be recognised with a histopathological examination which we do not have in our clinic, it could not be confirmed unequivocally that it was nothing but human hair.

Patient reviewed next day, he was happy with visual acuity of 6/6 and decrease in congestion, irritation and watering with no fluorescein staining.



Figure 3: removed hair on light microscopy

Discussion

Eye injuries from foreign bodies remain one of the common presentations to the emergency department. In this case we found an impacted hair in the tarsus probably human in origin (smooth surface and shape on microscopy). Since human hair do not have any setae so it can not penetrate deep in the tarsus but in this case on light microscopy we did not find barb or setae, it had smooth outer surface which probably confirms it to be of human origin. Human hair as foreign body in the conjunctiva has been reported in the past by Sathe SM.(3) When a male aged 40 years presented with complain of photophobia, lacrimation and pain in the right eye for the last 2 months presented with positive history of hair cut few days back. On Slit Lamp examination of the everted right upper lid they found raised areas (follicles) eight in number. The centre of each area was marked by a tiny black spot which looked like the end of a hair. After pulling out one of the hairs which was lying embedded in the follicle, they examined it under a microscope. It did not appear to be barbed and it appeared to be a human hair. Next day the whole strip of tarsus was removed and preserved as a specimen.

Conclusion

Sometimes foreign body may be missed on initial examination. So in every case of suspected foreign body, a meticulous slit lamp examination in higher magnification must be done with double eversion of lid. When a patient complains of foreign-body sensation, topical fluorescein should be instilled to check for the fine, linear, vertical corneal abrasions that are characteristic of retained foreign bodies on the eyelid margins or superior tarsal plate.

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