



EYELASH IN ANTERIOR CHAMBER AS AN INTRAOCULAR FOREIGN BODY- A RARE CASE REPORT

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<p>Article Info Received 21/08/2016 Revised 27/08/2016 Accepted 15/09/2016</p> <p>Key words: Intraocular foreign body (IOFB), Cilia, Anterior Chamber.</p>	<p>ABSTRACT We are hereby describing a patient who presented with an unusual intraocular foreign body, a cilia in the anterior chamber. The eyelash got implanted in the iris tissue following a penetrating self sealing corneal injury, and the patient presented with redness in eye and blurring of vision. On examination, we found there was an eyelash in the anterior chamber with traumatic cataract. He was operated for cataract and eyelash was removed and sent for pathological examination. The postoperative three month period was uneventful with a final visual outcome of 20/20.</p>
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INTRODUCTION

Ocular trauma is a leading cause of blindness. The types of intraocular foreign bodies (IOFB) can be metallic eg. copper and iron and non metallic, to e.g. wood, glass, plastic, cilia, stone. Cilia in anterior chamber as a foreign body is a very rare finding (0.4%) of all IOFBs [1]. Anterior chamber cilia account for 45% of all intraocular cilia. Anterior chamber as a site of the final resting place of and damage caused by an IOFB depend on several factors, including size, shape, and momentum of the object at the time of impact, as well as the site of ocular penetration. The frequency of IOFB varies greatly (upto 41%) worldwide, depending upon the population surveyed. Most IOFBs cause internal damage, and most will come to rest in the posterior segment. Commonly injured structures include the cornea, the lens, and the retina. No racial predilection has been found so far. According to the USEIR (United States Eye Injury Registry), 93% of patients with IOFBs are male and the average patient is aged 31 years. In addition to the initial damage caused at the time of impact, the risk of endophthalmitis and subsequent scarring (eg PVR) play an important role in the planning of the surgical intervention.

Case Report

A 30 year old male presented to eye emergency with redness, watering and pain in the right eye since one week. He gave history of injury in right eye with metallic particulate matter while dumping industrial wastes at work. Local examination of right eye revealed conjunctival and ciliary congestion, self sealed corneal perforation, acute iritis (cells 2+, flare 2+) , an eyelash in the anterior chamber adherent to the anterior surface of iris lying vertically with bulbous end upwards and pointed end downwards. Its upper end was at 3'o clock about 5mm from the limbus whereas lower end was at 3-30'o clock about 1mm from the limbus. The lenticular opacity was localized to centre of inferior surface of lens also involving the lens capsule and anterior cortex. USG B-Scan right eye showed no abnormal intraocular reflectivity No other foreign body was detected in the right eye. Left eye examination was within normal limits.

Patient was managed surgically as follows. The corneal wound was self sealing and did not require any sutures. Phacoemulsification cataract surgery was planned to manage traumatic cataract followed by hydrophobic



foldable posterior chamber intraocular lens implantation. Temporal incisions were given, main port at 7'o clock and sideport at 10'o clock. Then, dispersive viscoelastic was injected into anterior chamber and eyelash removed with

microstrats forceps. He was put on topical antibiotic steroid combination eye drops for six weeks. Postoperatively his BCVA was 20/20 and postoperative three month period was uneventful.

Fig 1. Showing cilia in anterior chamber following perforating self sealing corneal wound.



Fig 2. Showing traumatic cataract (yellow arrow) and self sealed corneal perforation wound (red arrow)

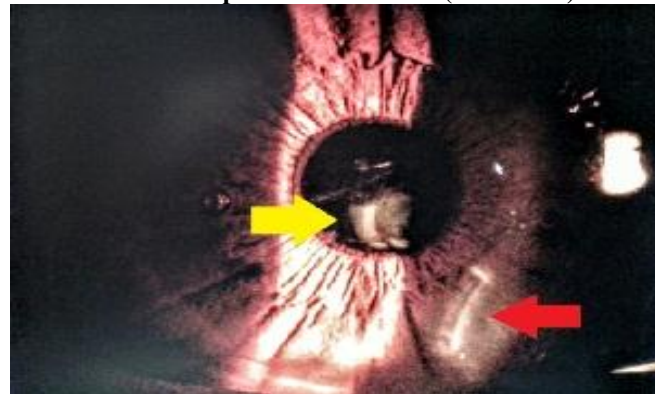


Fig 3. Showing HPE view of eyelash-foreign body under high magnification.



DISCUSSION

When talking about frequency and types of IOFB, the percentage of eyelash as IOFB is very less. The probable reason behind IOFB is high speed, fine shape and sharpness of the object striking the eye, such that the reflex time taken to close eyelids is slow and by that time the object has already penetrated the eye [1].

Duke Elder(1954c) states that it is only on rare occasions that the foreign body brushes the ciliary margin or lid closure occurs simultaneously with the impact, in which case the cilia may be carried into the anterior chamber [2].

The eyelash most commonly may be seen in the anterior chamber implanted in the iris tissue, or it may be floating freely in the aqueous humour. Sometimes the eyelash may lie partly in the corneal wound and partly in anterior chamber or adhered to iris tissue. In the current scenario, the eyelash after penetrating through the corneal perforation injured the anterior lens capsule resulting in traumatic cataract and was lying vertically in the anterior chamber adherent to the iris at 3'o clock position.(fig a and b)

Duke Elder (1954) has stated the following types

of possible reactions following injury with cilia in eye may occur [2].

1. If contaminated by infection, an acute pyogenic inflammation may be set up.
2. It may remain inert without exciting any reaction and may only be discovered accidentally.
3. A delayed inflammation may sometimes develop even after many years which may even be so destructive as to end in blindness.
4. Plastic iridocyclitis may occur.
5. It may excite the formation of a granulomatous tumour
6. As a rarity even sympathetic ophthalmitis may occur.
7. Cyst formation may occur as a typical delayed complication of retention of an eyelash in the anterior chamber.

Following trauma, other complications that have been reported with intraocular cilia include granulomatous and non-granulomatous uveitis, epithelial iris cyst formation, intralenticular abscess, anterior subcapsular cataract, corneal oedema and endophthalmitis [3].

The physical characteristics of the foreign body like mass and shape are also of prognostic significance. In

a study by Woodcock *et al* [4] foreign body with greater mass are associated with worse visual prognosis. A cilia is structurally very close to curly hair but the biological process related to follicle cycle and pigmentation differ markedly [5]. When the eyelash is present in the eye for a very long time it may undergo structural changes like depigmentation, splitting and in rare cases may get absorbed

In contrast to other organic materials, a cilium is relatively inert [6] and normally does not incite inflammation or infection. There are case reports of silent cilia remaining in the anterior chamber for up to 50 years. The innocuous nature of intraocular eyelash maybe due to its inert nature, and the immune privileged nature of the eye [7]. When no inflammation is present, patient may be kept under observation. Nevertheless surgical removal is imperative, if inflammation or infection becomes apparent

during observation period. Some Ophthalmologists exercise surgical intervention for removal even in quiescent eyes to obviate the risk of endophthalmitis.

Hence when its surgical removal appears to be easy no delay should be exercised in removing it, but if it is located at a place where removal is difficult, the risks should be weighed against the adoption of a policy of inactivity.[Duke Elder(1954b)] [2]. The decision to remove an intraocular eyelash remains a matter of controversy and should become a definite indication at the onset of clinical signs of inflammation or infection.

ACKNOWLEDGEMENT: None

CONFLICT OF INTEREST:

The authors declare that they have no conflict of interest.

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