

Misplaced cilia in lacrimal punctum presenting as allergic conjunctivitis- A case series

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Abstract

Background- Normally shed eye lashes (cilia) sometimes get dislodged in lacrimal punctum causing symptoms resembling allergic conjunctivitis. If not diagnosed it may lead to improper treatment and complications. **Purpose-** To describe a series of cases of misplaced cilia in lacrimal punctum who were misdiagnosed and treated as unilateral allergic conjunctivitis. **Method-** The study included 8 patients who presented with symptoms of allergic conjunctivitis and were found to have misplaced cilia in their lower or upper lacrimal punctum. In all patients, cilia were removed with plain forceps under slit lamp. **Results-** There were 8 patients (6 males and 2 females). Mean age of patients were 28.44+/- 4.27 years. Mean duration of symptoms (ocular irritation, watering and redness) were 5.25+/- 2.37 days. All patients were treated with topical anti allergic and lubricating eye drops before presenting to us. Five patients had cilia in upper punctum and 3 patients had it in lower punctum. In all patients, after removal of cilia from punctum, all symptoms were resolved promptly. **Conclusion-** In patients presenting with symptoms of allergic conjunctivitis, eyelid margin should be examined carefully and presence of cilia in the punctum should be specially looked for.

Keywords- Cilia, Lacrimal punctum, allergic conjunctivitis

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Introduction

Cilia (eyelashes) have a tendency to get lodged in different parts of ocular surface while or after rubbing of eyes. Conjunctival fornices, subconjunctival space and meibomian gland orifices are few more common sites for it. Lacrimal punctum is quite a rare site observed for it[1]. Once an eyelash is shed onto ocular surface, it initiates reflex tearing which carries it away to lacus lacrimalis and thus bringing it in close proximity with the lacrimal punctum. Often just root or root with some part of the cilia is protruding out from the punctum. Dislodged eyelash in lacrimal punctum is often missed during ocular examination and due to resemblance of the symptoms, is misdiagnosed as unocular allergic conjunctivitis or keratoconjunctivitis. Any delay in proper treatment leads to chronic ocular irritation. Just removal of the cilia with an atraumatic plain forceps alleviates all the symptoms. Here presenting a series of cases of misplaced cilia in lacrimal punctum who were being treated for allergic conjunctivitis.

Materials and methods

The study included 8 eyes of 8 patients who presented with unilateral symptoms of redness, itching, ocular irritation and watering. These patients presented to our eye opd over a period of 6 months. Duration of symptoms and treatment history was asked. They were already taking treatment for allergic conjunctivitis in form of anti allergic and lubricating eye drops but there was no improvement in the symptoms. History related to any even trivial injury/allergy/ FB exposure/ eye rubbing was asked. All patients underwent detailed ocular examination including Snellen visual acuity, intraocular pressure measurement, slit-lamp biomicroscopy and fundus examination. On meticulous slit lamp examination, they were found to have misplaced cilia in their upper or lower lacrimal punctum. Plain forceps under slit lamp was used to remove the misplaced cilia. Antibiotic and lubricating eye drops were prescribed to all of them for 1 week. Lacrimal syringing was done and results were noted. Intraocular pressure was measured. Patients were asked to follow up after 1 week.

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Details of all patients are shown in Table 1.

Case no	Age (Years)	Sex	Symptoms	Duration of symptoms	Treatment taken	Punctum involved	Part of the cilia protruding
1.	23	M	Redness, watering	7 days	Olapatadine (0.1%) eye drops	Upper	Root
2.	32	F	Ocular irritation, watering	6 days	Phenylephrine + naphazoline + CMC eye drops	Upper	Root
3.	24	M	Watering, foreign body sensation	2 days	Alcaftadine (0.25%) eye drops	Lower	Root
4.	33	M	Redness, watering	3 days	Olapatadine (0.1%) eye drops	Lower	Pointed end with shaft
5.	32	M	Redness, watering, ocular irritation	8 days	Bepotastine (1.5%) eye drops	Upper	Root
6.	31	F	Redness, watering	3 days	Phenylephrine + naphazoline + CMC eye drops	Upper	Pointed end with shaft

7.	24	M	Ocular irritation, watering	5 days	Olapatadine (0.1%) eye drops	Lower	Root
8.	25	M	Redness, watering, foreign body sensation	8 days	Bepotastine (1.5%) eye drops and CMC (0.5%) eye drops	Upper	Pointed end with shaft

Mean age of the patients was 28.44±4.27 years. There were 6 males and 2 females. Mean duration of symptoms was 5.25±2.37 days. All patients were given topical treatment for allergic conjunctivitis before presenting to us. On careful slit lamp ocular examination, 5 patients had misplaced cilia in upper punctum (Figure 1 & 2) and 3 patients had it in lower punctum.



Figure 1

Figure 2

Just root with a little shaft of the eyelash was visible in 5 of the cases and pointed end with shaft of the eyelash was visible in 3 of the cases. Anterior chamber was quiet in all patients. After removal of cilia from punctum, all symptoms were resolved promptly. Later lacrimal syringing was done and punctum and canaliculi in all the patients were found patent. Visual acuity was 6/6 in all the eyes under study. Intraocular pressure in the affected eyes were normal in all the cases. Fundus examination was within normal limit in all the patients. All the patients instilled antibiotic and lubricating eye drops in affected eyes for a week. In follow up visit after a week, all the patients had recovered from the earlier symptoms and had quiet white eyes.

Discussion

Eyelashes are normally arranged in two or three rows on upper and lower eyelids. They are more numerous on upper eyelid, approximately 150 eyelashes being present on upper and 75 on the lower eyelid. Lower lid eyelashes have a general tendency to fall outside the eye while the upper lid eyelashes are more prone to fall inside the eye. These are regularly shed every 100 to 150 days[2]. Lacrimal puncta lie on lacrimal papillae lateral to lacus lacrimalis and is seen properly on everting the eyelids. Usually shed eyelashes don't cause any symptoms. Sometimes however, an eyelash may settle down in an unusual location after being shed and being carried away by reflex tears produced in response to the ocular irritation caused by the eyelash itself. Cilia may get lodged in the lacrimal puncta sometimes due to its close proximity to the tear lake and is difficult to get expelled due to the barbs of the hair shaft[3]. Width of the canaliculus near the punctum is less than that of a cilium so negative pressure inside the lacrimal sac created during the blink cycle is supposed to cause sucking and retention of the cilium when it comes in contact with the punctum[4]. Cases of root end of cilia as well as shaft end of cilia protruding from the lacrimal punctum in case of dislodgement have been reported but root end protruding has been seen more. Also root end protruding has been reported to cause severe symptoms in comparison. Protruding part rubs the bulbar conjunctiva with every blink and this vicious cycle causes all the symptoms. Aggravation of the symptoms while closure of eyes has been reported. Misplaced cilia have also been reported in the meibomian gland orifices[6,7], subconjunctival space[8] and even corneal stroma. Even trimmed eyelash embedded in the meibomian gland orifice simulating symptoms of endophthalmitis have been reported in past[9]. Cut head hair lodged in upper punctum have also been reported[10]. Cilia in lacrimal punctum might cause additional problems. The patient usually presents with a history of unilateral redness, foreign body sensation, ocular irritation and watering. Sometimes the conjunctival congestion may be more localised to the nasal part lateral to plica semilunaris and may be mistaken for an inflamed pingicula or episcleritis[11]. Unless the treating ophthalmologist is aware that a shed out eyelash may be found at such an unusual location, one may not look for it and can lead to misdiagnosis and unnecessary delay in proper treatment. In our study also, all patients were misdiagnosed and treated as unilateral allergic conjunctivitis before presenting to us. On careful lid examination after everting the eyelids, lacrimal puncta can be seen engaged with the eyelash in such cases. Eyelashes are

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reported to enter the upper punctum more frequently than the lower punctum[12,13]. A punctal foreign body can cause secondary ocular inflammation.[14] In our study too, misplaced cilia was present in upper punctum in 5 cases (62.5%). Misplaced cilia in lacrimal puncta can further obstruct the canaliculus, causing canaliculitis or dacryocystitis. Cases of dacryolith formation around an eyelash retained in the lacrimal sac have also been reported. With longer duration, it might be difficult to diagnose the actual condition. Removing the mislodged cilia is followed by prompt relief from the symptoms.

Conclusion

Patients presenting with unilateral non specific symptoms of ocular irritation, redness and watering who are not getting relieved by anti allergic or lubricating eye drops; occasionally mislodged cilia in lacrimal punctum might be the cause. Thus, meticulous eyelid margin and lacrimal punctum examination is required in such cases. Timely diagnosis and intervention will prevent further complications.

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