CASE REPORTS

Atraumatic iris cilia

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Abstract

We report two cases of ectopic cilia originating from the iris without any convincing history of injury to the eye. One required surgical removal to prevent further endothelial and lens damage developing over a five-year observation period.

Eyelashes implanted into the iris following an injury have been reported on a number of occasions.¹ The ballistics are difficult to envisage, but the projectile may remove several lashes from the lid margin together with a small piece of skin and transport this to the iris, into which it becomes implanted. The projectile is subsequently withdrawn or falls out, leaving the lashes behind, and the corneoscleral wound may be quite small. The mechanism is well documented.¹

This, however, may not be the only means by which lashes can be found emerging from the iris into the anterior chamber and we report two cases suggesting a different origin.

Case reports

CASE 1

On 2 March 1981 a 16-year-old female was referred by her optician with a history of mild intermittent pain in her left eye over the preceding months. She was found to have three lashes that appeared to arise from the root of the iris anteriorly and one that emerged through the pupil (Fig 1). Gonioscopy did not reveal any angle recession and did not clarify the site of origin of the lashes. Slit-lamp examination of the

Figure 2 Case 1. Left eye 2 March 1981 showing superior limbus and sclera with no evidence of scarring.

superior limbus and sclera did not show any evidence of old corneoscleral scarring (Fig 2).

On initial examination the visual acuity was 6/6 unaided right and 6/18 unaided left (6/12 with pinhole). The eye was quiet and required no treatment at that time. At 6 months and one year later no significant change was noted.

She returned four years later on 15 December 1986 because of irritation in the eye, and on this occasion she was found to have developed an early anterior capsular lens opacity plus a central posterior corneal opacity where the internal lashes had rubbed the corneal endothelium (Fig 3). Her visual acuity was 6/5 right and 6/36 left (6/9 corrected).

On 12 February 1987 a sector iridectomy was performed, the lashes were removed, and to date there has been no recurrence nor further problems with the eye.

Figure 3 Case 1. Left eye 15 December 1986. The third lash from the iris root is now concentric with the limbus.

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Figure 1 Case 1. Left eye 2 March 1981. The lash emerging through the pupil is not visible.

Figure 4 Case 2. Left eye, 21 March 1985.

A histology study* failed to reveal the lash follicles or the origin of the lashes, which may therefore have been more posterior, perhaps from the ciliary body. The cilia became dislodged from the iris tissue during processing and appeared to have a normal lash-like structure, but no follicles were seen on serial section. There was no evidence of teratoma or foreign body granuloma.

CASE 2

On 21 March 1985 a 30-year-old man presented to the ophthalmic casualty department with a small corneal abrasion resulting from a blow to the eye with a piece of wood several hours earlier. On slit-lamp examination it was found that he had three cilia protruding from the iris at the 12 o'clock position (Fig 4). These were not touching the corneal endothelium, and he had no history of pain or irritation in the eye. His acuity was 6/6 right and left unaided.

The patient was examined by GISM and two consultant ophthalmologists, who found no evidence of corneoscleral scarring to indicate a previous perforating injury to account for the lashes. The patient recalled being scratched in the eye 12 years previously by a piece of wire, but the severity of this injury and the lack of evidence of trauma on slit-lamp examination make it difficult to account for the cilia as a result of this accident. The patient was asked to attend for review but was lost to follow-up, and presumably the cilia have not been causing him any discomfort or visual problems.

Discussion

The origin of the ectopic cilia in these two cases is

a mystery. The pathology in case 1 confirmed them to be like ordinary lashes but did not explain their derivation. In this case the lashes either moved or grew in the anterior chamber. We did not measure their length, but they appeared to be both longer and in new positions, causing damage to lens and endothelium and necessitating their removal.

It is difficult to exclude long forgotten childhood accidents, and lashes have been discovered implanted in the iris years after the original injury.¹⁻³ But the absence of any history of previous trauma in case 1 and the history of only mild trauma in case 2 plus the lack of corneoscleral scarring on slit-lamp examination makes it difficult to believe that the lashes were implanted as a result of an accident. This is in accord with the personal experience of one of us (GISM), who has observed an eye injury resulting in lashes implanted into the iris. In this case (unpublished) the lashes were removed from the lid margin by the recoil of a piece of wire and implanted into the iris through a corneoscleral laceration several millimetres long. The wound required suturing and the injury resulted in a severe and chronic inflammatory reaction despite removal of the lashes.

How then can an ectodermal structure develop from mesoderm and neuroderm? Hair has been described both in dermoids and teratomata.⁴⁻⁶ Epibulbar dermoids have been described containing hair, which in one case grew through the conjunctiva.⁷ Dermoids have also been described invading the iris,⁷ and these cilia can grow at puberty.

Possibly the ectopic cilia in the two cases described were part of a dermoid cyst or teratoma, and some of the previously described cases of lashes in the anterior chamber with no good evidence of trauma may also fall into this category. The specimen of iris for histology in case 1 showed only normal iris tissue, but this may have been because the lashes arose from a dermoid or teratoma situated more posteriorly in the ciliary body or sclera, and this was not excised.

These cases question the assumption that all intraocular cilia must have been derived from trauma.

- 1 Duke-Elder S. *Textbook of ophthalmology*. London: Kimpton, 1972; 14 (1): 553-9.
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- 3 Hughes RA. A cilium thru the iris without symptoms. *Am J Ophthalmol* 1924; 7: 702.
- 4 Greer CH. *Ocular pathology*. 3rd ed. London: Blackwell, 1979: 223.
- 5 Spencer WH. *Ophthalmic pathology: an atlas and textbook*. Philadelphia: Sanders, 1986; 3: 2489-93.
- 6 Yanoff M, Fine B. *Ocular pathology: a text and atlas*. Hagerstown: Harper and Row, 1975: 516-26.
- 7 Duke-Elder S. *Textbook of ophthalmology*. London: Kimpton, 1964; 3 (2): 820-3.