

Sir,

Corneal birth trauma: a cause for sensory exotropia

Anisometropia, unilateral aphakia and unilateral visual impairment from organic causes can result in reduced visual acuity in one eye. These present a severe obstacle to sensory fusion, and may abolish the fusion mechanism altogether. The strabismus that follows can be a direct consequence of the primary sensory deficit and is known as sensory heterotropia. Ocular injuries induced by forceps delivery have been found to be associated with poor vision. We describe a patient who presented with late-onset sensory exotropia due to corneal birth trauma.

Case history

A 67-year-old man was referred for cosmetic correction of his left divergent squint. He had a history of ocular birth trauma and subsequent poor vision in his left eye. He complained that his squint has become more noticeable over the previous 10 years.

On examination his best-corrected visual acuity was 6/6 (+2.00/+1.25 × 176°) in the right eye and counting fingers at 1 m (−6.00/+2.00 × 110°) in the left eye. The retinoscopic reflexes in his left eye were irregular. He had a left divergent squint, which measured 30 prism dioptres for distance and near fixation. His ocular movements were full. Keratometry readings were 41.00/42.30 in the right eye and 36.75/40.65 in the left, axial length 23.67 mm in the right eye and 25.23 mm in the left. The central corneal thickness was 533 nm (right eye) and 717 nm (left eye) with ultrasonic pachymetry.

Slit-lamp examination of the left cornea showed a large, obliquely oriented, discrete Descemet's membrane rupture with clear stromal interval, in a quiet eye (Figs. 1, 2). The examination of his right eye was unremarkable. The intraocular pressure and fundus examination were normal. He was placed on the waiting list for cosmetic squint correction.

Comment

Break in sensory fusion or any obstacle to sensory fusion due to primary sensory deficit can result in sensory heterotropia. The common causes are anisometropia, corneal opacity, injuries, congenital or traumatic cataracts, macular lesions and optic atrophy.

Various factors have been suggested to contribute to the development of sensory esotropia or exotropia in the amblyopic eye.¹ These include the age of the patient at the time of visual acuity decrease in one eye, the refractive status of the fellow good eye and the relative position of rest the amblyopic eye adopts.

Ocular injuries induced by forceps delivery have been well recognised for many years.²⁻⁵ The resulting optical and structural changes to the globe are profound. An injured cornea with ruptured Descemet's membrane has been found to be associated² with high astigmatism, deep anterior chamber, myopia and poor vision. The mechanism⁴ of forceps damage is thought to be the compression of the globe against the superior orbit by a

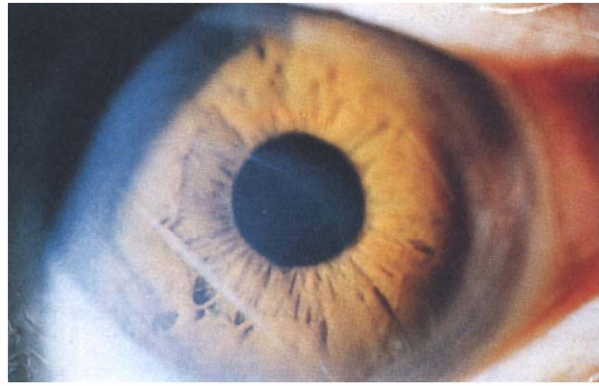


Fig. 1. Obliquely oriented discrete Descemet's membrane tear with clear stromal interval.

forceps blade slipping over the inferior orbital wall, causing the cornea to stretch horizontally. Excessive horizontal stretching would cause the vertically oriented ruptures generally observed in the affected eyes. The initial damage produces a cloudy cornea, which clears later leaving behind single or multiple breaks in Descemet's membrane. The breaks are generally oriented towards the vertical meridian and appear as reduplication striae in Descemet's membrane. The long axes of the linear striae generally correspond to the steep keratometric meridian and the plus cylinder axis of the spectacle correction.² The treatment of anisometropia and amblyopia with spectacles and patching does improve vision in infants, but this treatment option is likely to be long-term and the visual results can be discouraging.

Our patient has a clear history of forceps-assisted delivery and poor vision in his left eye since birth. Our findings of poor vision, myopia and the astigmatism axis corresponding to the orientation of the breaks in Descemet's membrane are similar to the findings in a previous report.² The amblyopic eye over the years has slowly drifted outwards with cosmetically significant divergent squint and we have planned on cosmetic correction of the squint. Though forceps-related ocular injuries are rare in modern obstetric practice,³ their effects can be seen as a late presentation.

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Fig. 2. Slit beam shows the Descemet's membrane tear.

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Sir

Chronic conjunctivitis due to lacrimal system blockage relieved by dacryocystorhinostomy

Chronic conjunctivitis has many aetiologies and is often misdiagnosed for long periods. This can result in multiple therapy complicating the clinical picture and obscuring the original diagnosis. We present two similar cases where the patient received prolonged topical medication for chronic conjunctivitis before the correct diagnosis of lacrimal system blockage with recurrent infection was made. Both patients responded well to dacryocystorhinostomy (DCR) operations.

Case reports

Case 1. A 91-year-old woman with primary open angle glaucoma treated with timolol 0.5% had bilateral papillary conjunctivitis, which had been treated with courses of g. chloramphenicol and g. fucithalamic. Conjunctival swabs had grown *Staphylococcus aureus* sensitive to both antibiotics on two occasions. She had a sac washout in casualty, which had demonstrated a partial blockage on both sides.

At her next appointment she had a diffuse bilateral papillary conjunctivitis associated with a mucopurulent discharge. The possibility of cicatricial conjunctivitis was considered and so the patient was referred to the External Eye Disease clinic.

At this time she was noted to have bilateral lower lid ectropion, mucopurulent discharge and papillary conjunctivitis (Fig. 1). Syringing of both sides revealed a hard stop with no passage of fluid into the nasopharynx but reflux of copious amounts of mucopurulent material.

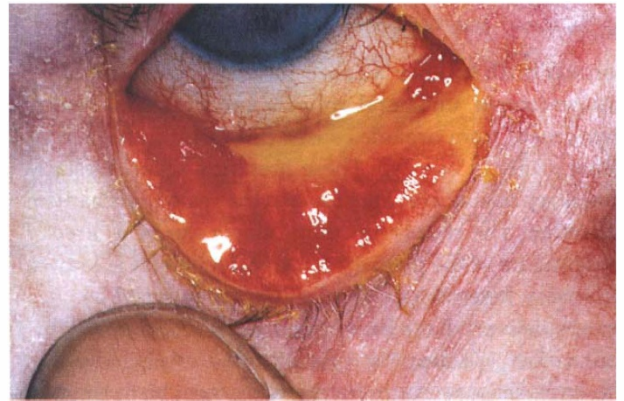


Fig. 1. Case 1. On referral the patient had lower lid ectopica, mucopurulent discharge and papillary conjunctivitis.

This fluid grew *Staphylococcus aureus* but treatment with topical and systemic antibiotics was unsuccessful. She was referred to the Orbital team and underwent bilateral DCRs after which she is asymptomatic.

Case 2. An 80-year-old woman was referred to the External Eye Disease clinic with a possible diagnosis of ocular cicatricial pemphigoid. She had a 4 month history of a sore and red eye which had initially been treated by her general practitioner with topical antibiotics with no improvement. She was subsequently seen in another ophthalmic clinic and found to have a copious green discharge associated with marked papillary conjunctivitis and diffuse punctate erosions.

At the first consultation she had papillary conjunctivitis with a thick mucopurulent discharge. She also had a significant number of punctate epithelial erosions that had diminished the vision. A conjunctival swab grew *Staphylococcus aureus* sensitive to flucloxacillin and chloramphenicol. She was commenced on g. chloramphenicol and g. predsol 0.5%. Four weeks later her condition was unchanged and syringing of her nasolacrimal system demonstrated a complete blockage of the nasolacrimal duct. She was commenced on oral antibiotic with no benefit. She underwent a DCR with silicone tubes that were removed 3 months post-operatively. She has been asymptomatic since then.

Comment

We present two similar cases where elderly women were treated for chronic conjunctivitis for long periods (1 year and 4 months, respectively) before a definitive diagnosis was made.

Chronic conjunctivitis is a well-recognised consequence of delayed tear clearance due to punctal obstruction,¹ chronic canaliculitis due to *Actinomyces israeli*² or nasolacrimal duct obstruction³ that is often misdiagnosed. Although prolonged use of topical medication is usually associated with upper lacrimal system problems they can also cause nasolacrimal duct blockage.³