CASE REPORT

Idiopathic acquired dacryocystocele treated with endonasal endoscopic dacryocystorhinostomy

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SUMMARY

A 64-year-old woman presented with a medial canthal mass in her left eye, which was accompanied only by mild epiphora. There was no history of dacryocystitis, bloody tears, midfacial trauma or surgery. Physical examination showed a non-inflammatory, subcutaneous, immobile mass below the level of the medial canthal tendon. Lacrimal irrigation demonstrated blockage at the nasolacrimal duct. A CT revealed a non-enhancing, low density, cystic lesion in the inferomedial aspect of the left orbit without bony erosion, which was compatible with an idiopathic acquired dacryocystocele. The patient underwent endonasal endoscopic dacryocystorhinostomy (DCR) and silicone intubation. Epiphora resolved immediately after surgery. Two years after surgery, the patient has had no recurrence of either the epiphora or the orbital. Idiopathic acquired dacryocystocele associated only with epiphora without accompanying dacryocystitis although rare should be considered in the differential diagnosis of acquired non-inflammatory medial canthal masses. Endonasal endoscopic DCR represents a safe and effective treatment.

BACKGROUND

Dacryocystocele refers to a distended lacrimal sac and manifests as a bluish cystic swelling at and below the medial canthal area. There are two types, congenital and acquired. Congenital dacryocystocele is an uncommon condition of neonates and infants, resulting from blockage at the distal end of the nasolacrimal system (valve of Hasner).¹ Acquired dacryocystocele can be idiopathic or a complication of dacryocystitis, trauma, surgery, tumours or punctal agenesis.²⁻³ Idiopathic acquired dacryocystocele accompanied only by epiphora without complicating dacryocystitis is extremely rare, with only four cases reported in the literature.¹⁻³⁻⁴ Here an additional case of idiopathic acquired dacryocystocele associated only with epiphora is presented.

CASE PRESENTATION

A 64-year-old woman presented with a medial canthal mass in her left eye, which was accompanied by mild epiphora. She had been aware of the lesion for 2 years but had recently noted an increase in its size. There was no history of dacryocystitis, bloody tears, midfacial trauma or surgery.

Physical examination showed a non-inflammatory, subcutaneous, immobile mass below the level of the medial canthal tendon (figure 1A). After applying pressure to the mass, there was no reflux of material through the puncta. Dye disappearance was delayed

on the left eye. Lacrimal irrigation demonstrated blockage at the nasolacrimal duct. Nasal endoscopy did not show any nasal cyst, polyp or evidence of paranasal sinusitis.

CT revealed a non-enhancing, low-density, cystic lesion 2.5×2.0 cm in the inferomedial aspect of the left orbit without any bony erosion (figure 2), suggesting an idiopathic acquired dacryocystocele.

TREATMENT

The patient was treated with topical antibiotics and massage. No response was observed after 1 week, and the patient underwent endonasal endoscopic dacryocystorhinostomy (DCR), silicone intubation

Figure 1 (A) In a 64-year-old woman who had epiphora of the left eye, a subcutaneous, immobile and non-tender mass 2.5 cm in diameter was located near the left medial canthal region. (B) Appearance of the patient 2 years after endoscopic dacryocystorhinostomy.

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Figure 2 Preoperative axial CT scan showing a non-enhancing, low-density, well-defined cystic lesion in the anterior left orbit.

and a biopsy of the lacrimal sac. During surgery, a yellowish, clear, mucoid fluid was drained from a distended lacrimal sac. Culture of the fluid showed no evidence of infection and histological examination revealed squamous epithelium containing goblet cells without any neoplastic tissue.

OUTCOME AND FOLLOW-UP

Epiphora resolved immediately after surgery. The silicone stent was removed 6 months later. Two years after surgery, the patient has had no recurrence of either the epiphora or the orbital mass (figure 1B).

DISCUSSION

Acquired dacryocystocele occurs in adults and is extremely rare.² Its causes include chronic infections, trauma, iatrogenic disorders, primary and recurrent tumours and idiopathic blockage of the nasolacrimal duct.^{2–3} Because of the absence of secondary causes, the present case of acquired dacryocystocele is most likely idiopathic. Idiopathic acquired dacryocystocele results from chronic nasolacrimal duct obstruction and secondary functional proximal obstruction at the junction of the common canaliculus and sac.² A common complication is dacryocystitis due to secondary infection of the sac, which was present in all patients of two earlier case series (three and 21 patients).^{4–5} To our knowledge, there are four documented cases of idiopathic acquired dacryocystocele associated only with epiphora without accompanying dacryocystitis.^{1–3–6} Differential diagnoses include lacrimal sac tumour, lacrimal sac diverticula, dermoid cyst, meningocele, encephalocele, dermoid, haemangioma, glioma and ethmoid or maxillary sinus mucocele.

Treatment modalities for the management of dacryocystocele vary according to its type.² The congenital form is managed with eye drops, massage of the lacrimal sac and nasolacrimal probing in order to relieve occlusion of the Hasner valve. In congenital dacryocystocele the enlarged lacrimal sac regains its original size after conservative treatment.² In adults, surgical intervention is required because the pathogenetic mechanism of nasolacrimal duct obstruction is different from that of a congenital dacryocystocele and the dilated sac does not return to its original size.² Acquired dacryocystocele responds to DCR with similar success rates for external and endoscopic approaches.⁷ We preferred endonasal endoscopic DCR due to the absence of facial scar, preservation of the pump mechanism of the orbicularis oculi muscle, less bleeding and faster rehabilitation.⁷

Learning points

- ▶ Idiopathic acquired dacryocystocele associated only with epiphora without accompanying dacryocystitis is extremely rare.
- ▶ Acquired idiopathic dacryocystocele should be considered in the differential diagnosis of acquired non-inflammatory medial canthal masses by otolaryngologists and ophthalmologists.
- ▶ Endonasal endoscopic DCR represents a safe and effective mode of treatment.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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