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Eye (2003) **17**, 453–454. doi:10.1038/sj.eye.6700358

Sir,

Reply: Debris on instruments

We appreciate the interest shown by authors Wadood and Dhillon in our article¹ on the presence of debris on processed ophthalmic instruments. They point out that debris may be retained within fine-bore instruments and go unrecognized. This is definitely a possibility. However, we were able to identify debris extruding from the aspiration channels in 6% of the irrigation and aspiration (I/A) hand pieces. We identified this by engaging the reflux mechanism of the foot pedal before putting the hand piece to use.

Wadood and Dhillon reinforce the various points that we discussed in our article. This further supports our findings and the recommendations made in our article. The summary of our recommendations include:

1. Inspection of instruments under the operating microscope to identify the presence of debris.
2. Checking the aspiration channel of the irrigation and aspiration hand pieces by engaging the reflux mechanism before entry into the eye.
3. Foldable lenses should be laid on fibre-free surfaces when folding. The sheets on the instrument trolley should be made of fibre-free material.
4. Viscoelastic substance from the tips of instruments, especially the intraocular lens introducers, should be removed by soaking the instruments in water and using a soft brush to clean the surfaces and the crevices. This is best carried out in the operating theatre immediately after the surgery, before the instruments are sent for sterilization.
5. Pressure syringing of the aspiration channels of the I/A hand pieces should be carried out at the end of the operation to remove the debris before they dry up.
6. Ultrasonic cleaning of ophthalmic instruments should be a routine to facilitate adequate removal of deposits from the surfaces of instruments.

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Eye (2003) **17**, 454. doi:10.1038/sj.eye.6700359

Sir,

Giant mucocoele masquerading as chronic unilateral conjunctivitis

Mucocoeles of the paranasal sinuses are relatively uncommon. They generally arise from either the ethmoid or frontal sinus, followed by the sphenoid and maxillary

sinuses.¹ Often, patients get headache, sinusalgia, facial heaviness, anosmia, rhinorrhoea, and nasal obstruction. Sometimes, mucocoeles may be, associated with ocular complications, including proptosis, epiphora, deep orbital pain, double vision,² and visual disturbances.³ We describe an unusual giant mucocoele in an old man who presented with a history of chronic unilateral conjunctivitis without clinically noticeable symptoms of sinusitis.

Case report

A 73-year-old man was referred to our centre with a 6-month history of irritation and redness in the right eye, and unilateral follicular conjunctivitis unresponsive to topical antibiotics and steroids. He also reported to have fullness sensation around the right eye in the recent 2 weeks. He did not complain of any headache, pain, double vision, or nasal symptoms. There was no history of trauma or sinusitis. On examination, his best-corrected visual acuities were 6/7.5 in both eyes. Hertel's exophthalmometry revealed 2 mm of right-side exophthalmos. Extraocular movements were full. The intraocular pressure was 21 mmHg in the right eye and 17 mmHg in the left eye. Slit-lamp examination showed severe congestion over right bulbar conjunctiva (Figure 1) and multiple follicles in the upper and lower palpebral conjunctiva of the right eye. Fundoscopic examination was unremarkable. Thyroid function tests (T3, free T4, and TSH) were within normal range. Computed tomography (CT) demonstrated a 4-cm well-circumscribed cystic lesion occupying the right-side ethmoid, maxillary, sphenoid, and frontal sinuses, suggestive of mucocoele (Figure 2). In addition, the cystic lesion had destroyed the lamina papyracea and invaded into the right orbit. The bony erosion of the frontal skull base was also noted. Otolaryngological evaluation

Figure 1 The paranasal mucocoele presents as chronic unilateral conjunctivitis.

detected bulging ethmoid bulla with massive mucoid secretions. He received endoscopic surgery. After removal of the lateral half of the anterior middle turbinate, all the contents of the mucocoele were drained out. Widening of the maxillary sinus orifice was performed for secretion drainage at the same time. The culture of the pus grew no organism afterwards. Pathological examination of the cystic wall disclosed a mucus-secreting respiratory epithelium lining with mucoid secretions and infiltration of chronic inflammatory cells in the subepithelial connective tissue. Over subsequent weeks, the patient had gradual improvement of all his symptoms. There was no evidence of disease recurrence after a follow-up period of 12 months.

Comment

The term mucocoele was coined in 1896 by Rollet. Mucocoeles are epithelial-lined cysts containing mucus and desquamation products in the sinus under pressure, which leads to cystic expansion of the involved sinus and

Figure 2 (a) Coronal CT showed a giant, well-circumscribed cystic lesion occupying the right-side ethmoid, maxillary, sphenoid, and frontal sinuses. Bony erosion of right-side medial orbital wall and frontal skull base around the mass were also noted. (b) Axial CT of the cystic lesion.

subsequent bony destruction. They spread along the path of least resistance, such as the orbit and adjacent sinuses, which cause different ocular symptoms. In the frontoethmoidal complex, they preferentially expand into the superior medial orbit, where they may induce frontal headache, proptosis, diplopia, lacrimal drainage impairment, and displacement of the globe in a downward and outward direction.^{1,2} This type of presentation is most familiar to ophthalmologists, and it generally makes the patient seek treatment. Maxillary sinus mucocoeles can encroach on the inferior orbit to present proptosis, exophthalmos and infraorbital nerve compression⁴ or may lead bone erosion to cause enophthalmos and globe ptosis.⁵ Posterior sphenothmoidal mucocoeles are adjacent to optic chiasma and optic canal. After a long asymptomatic period, they may manifest as headache, ocular pain, visual loss, and oculomotor palsies.^{1,3,6}

In the current era, most patients with mucocoeles have a history of either midface bone trauma or recurrent nose and sinus diseases.⁷ The present case is unique in that the giant mucocoele, extending from ethmoid sinus to frontal, sphenoid, and maxillary sinus, can initially mimic a chronic unilateral conjunctivitis without clinically noticeable nasal symptoms. The mucocoele in our case was associated with extensive bony destruction of the medial maxilla and lacrimal bone in the region of the nasolacrimal canal and lacrimal sac fossa, which might produce tear drainage apparatus to be compromised, resulting in chronic conjunctivitis. On the other hand, persistent leakage of mucocoele contents into the orbit might also be the underlying cause of the chronic inflammation. Therefore, we would like to point out that mucocoele may present with slowly evolving signs resembling conjunctival inflammation. While persisting signs and symptoms of conjunctivitis do not respond to standard treatments, a subtle proptosis or other symptoms suggestive of orbital lesion may give a hint to ophthalmologists to undergo a radiographic imaging study. Early diagnosis of an orbit mucocoele may avoid serious ocular complications.

Acknowledgements

Public and private support: None.

None of the authors have any commercial interest in the material mentioned herein.

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Eye (2003) **17**, 454–456. doi:10.1038/sj.eye.6700343