

forced duction test and impeding access to the extraocular muscles.^{2,3} In a recent survey carried out in the Southwest of England, neuromuscular blocking agents were used in only 45% of children and 34% of adults undergoing strabismus surgery.⁴ The authors point out that conditions for forced duction test and ocular access may be less than ideal in a large proportion of patients undergoing strabismus surgery.

In paediatric ptosis surgery, it is necessary to set the height of the eyelid relative to the pupil under general anaesthetic.⁵ For this, the patient must be paralysed to abolish Bell's reflex at least until the levator muscle has been sutured into place.

References

- 1 Rossiter JD, Wood M, Lockwood A, Lewis K. Operating conditions for ocular surgery under general anaesthesia: an eccentric problem. *Eye* 2006; **20**(1): 55–58.
- 2 Castanera de Molina A, Giner Munoz ML. Ocular alignment under general anaesthesia in congenital esotropia. *J Pediatr Ophthalmol Strab* 1991; **28**(5): 278–282.
- 3 Harrad R. Strabismus Surgery. In: Easty D, Sparrow J (eds). *Oxford Textbook of Ophthalmology*. Oxford University Press: Oxford, 1999, p 1242.
- 4 Dell R, Williams B. Anaesthesia for strabismus surgery: a regional survey. *Br J Anaesth* 1999; **82**(5): 761–763.
- 5 Tyers A, Collin J. *Colour Atlas of Ophthalmic Plastic Surgery*, 2nd edn. Butterworth Heinemann: London, 2001, p 161.

RA Harrad and P Stoddart

Bristol Eye Hospital, Lower Maudlin Street,
Bristol BS1 2LX, UK

Correspondence: RA Harrad,
Tel: +44 117 9284689;
Fax: +44 117 928 4891.
E-mail: r.a.harrad@bristol.ac.uk

Eye (2007) **21**, 256–257. doi:10.1038/sj.eye.6702487;
published online 16 June 2006

Sir,
Eye positions during ocular surgery

We read with interest the solutions proposed by Rossiter *et al*¹ for eccentric eye positions that develop during general anaesthesia. Ideally, the physician should recognize the abnormal eye position before starting surgery. Allowing a few minutes to elapse between

placement of a superior rectus bridle suture and the first incision should permit the intraocular pressure to normalize so that surgery can be performed safely.

As the authors indicate, a peribulbar or subtenons infiltrate of anaesthesia limited to the region around the superior rectus muscle may resolve the problem. Perilimbal traction sutures can also be helpful in providing the surgeon with more complete control of ocular movements. These are useful not only when general anaesthesia leads to eccentric eye positions but also when local anaesthesia does so.

Although the authors recommend the use of nondepolarizing muscle relaxants (NDMRs) to manage this intraoperative hurdle, we note that their use carries significant risks, as these drugs are implicated as the most common causative agents of anaphylactic reactions in anaesthetic patient populations.² Therefore, we believe that NDMRs should be considered only as a last resort after failure of local anaesthetics, traction sutures, and the tincture of time to stabilize the globe.

References

- 1 Rossiter JD, Wood M, Lockwood A, Lewis K. Operating conditions for ocular surgery under general anaesthesia: an eccentric problem. *Eye* 2006; **20**: 55–58.
- 2 Mertes PM, Laxenaire MC, Alla F, Groupe d'Etudes des Réactions Anaphylactoides Peranesthésiques. Anaphylactic and anaphylactoid reactions occurring during anaesthesia in France in 1999–2000. *Anesthesiology* 2003; **99**: 536–545.

A Singh and JM Stewart

Department of Ophthalmology, University of
California, 10 Koret Way, K301, San Francisco,
CA 94143-0730, USA

Correspondence: JM Stewart,
Tel: +1 415 476 0496;
Fax: +1 415 476 0336.
E-mail: stewartj@vision.ucsf.edu

Eye (2007) **21**, 257. doi:10.1038/sj.eye.6702488;
published online 16 June 2006

Sir,
Reply to Harrad and Stoddart

We are grateful to Harrad and Stoddart for their valuable observations made on the points raised in our paper.

We would also like to thank Singh and Stewart for their interest and response to our article. Although it is true that the relative risk of anaphylaxis to nondepolarizing muscle relaxants is high compared to other anaesthetic agents, it is a small risk in absolute terms (estimated to be 1:15 000–30 000 anaesthetics). We would argue this is considerably lower than the risk of sight-threatening intraoperative complication due to the eccentric eye.

They are also quite correct in that local anaesthesia infiltrations may relieve the problem. They also may not. Furthermore, peribulbar injections carry the risk of globe perforation.

We would maintain that our proposed solution is a reliable, reasonable and safe one, particularly when a 'tincture of time' is either unavailable or ineffective.

JD Rossiter and M Wood

Department of Ophthalmology, Taunton and Somerset NHS Trust, Taunton, Somerset, UK

Correspondence: JD Rossiter,
Tel: +44 1823 342950;
Fax: +44 1823 342943.
E-mail: jonathan.rossiter@tst.nhs.uk

Eye (2007) **21**, 257–258. doi:10.1038/sj.eye.6702490;
published online 21 July 2006

Sir,
Blebitis after deep sclerectomy

Blebitis after trabeculectomy is a well known and potentially dangerous infection that can lead to endophthalmitis as the normal barriers for intraocular spread of bacteria are weakened.¹

In deep sclerectomy, there is no penetrating opening intraocularly as Descemet's membrane and the trabecular meshwork are still intact at the site of filtration. To the best of our knowledge, blebitis after deep sclerectomy has not been described before. Here, we report a case of blebitis with severe intraocular inflammation after deep sclerectomy.

Case report

A 59-year-old Caucasian male presented with a pseudoexfoliative glaucoma in his right eye (RE). His intraocular pressure (IOP) was 56 mmHg and he had

already sustained severe damage to the visual field and the optic disc. He was referred to our clinic for glaucoma surgery when medical treatment was insufficient to control IOP. At the first visit at our clinic, his RE had an IOP of 39 mmHg despite medical treatment and visual acuity (VA) was 6/12.

A standard deep sclerectomy was performed. Preoperatively, the eye was rinsed with chlorhexidine solution 0.05%.² After sub-Tenon's anaesthesia, a limbal peritomy was performed and the conjunctiva was retracted. An outer scleral flap was created and a deep internal scleral triangular flap was dissected anteriorly until the canal of Schlemm was opened and HealonGV was injected into the canal on each side. The internal wall of Schlemm's canal was peeled off. Anteriorly, the Descemet's membrane was dissected from the corneal stroma for about 1 mm and good percolation of aqueous humour was observed. The internal scleral flap was excised and an implant was sutured to the bottom of the scleral 'lake'. The implant was a 4 mm cut piece of a 1-0 polydioxanone ligature (Ethicon PDS*II article number Z627E). The outer flap was sutured with two single nylon sutures and the conjunctiva was closed with a vicryl suture. Two milligrams of betamethasone were injected subconjunctivally. No antibiotics were used either pre-, intra-, or postoperatively, which is standard in sclerectomy surgery in our institution. No antimetabolite was used intra- or postoperatively.

Postoperatively, the eye was treated with dexamethasone 0.1% q.i.d. starting directly after the operation.

The first postoperative days were uneventful with IOP 2 mmHg on day 1 and 12 mmHg on day 3.

On postoperative day 13, the patient reported pain and redness and eyelid swelling with some purulent secretion from the eye with an onset on the previous day. On slit-lamp examination, the eye was red with swollen eyelids, and purulent secretion was noted around the bleb. The IOP was 11 mmHg, VA was 6/24 and there were 3+ cells in the anterior chamber. A conjunctival smear culture was taken and the patient was treated with topical levofloxacin 0.05% drops every hour.

Sixteen hours later, he was re-examined. The eye showed increased injection with a whitish filtration bleb surrounded by dilated hyperemic vessels and purulent secretion (Figure 1). There were 4+ cells in the anterior chamber with fibrinous strands but no hypopyon. The vitreous was clear, however. The IOP was 20 mmHg. He was admitted to hospital and treated topically with fortified cefuroxime 3% and levofloxacin 0.05% every hour, cyclopentolate 1% t.i.d. and he continued dexamethasone 0.1% q.i.d. Intraocular samples were not taken as overt endophthalmitis was not suspected.¹ The conjunctival culture was positive for *Staphylococcus*