Editorial

The 'detached' rectus muscle

Locating and repairing a lost or slipped rectus muscle can be challenging and is by no means always successful. It is perhaps not surprising that figures on the incidence of this complication are hard to come by, but it is certain that every ophthalmologist is likely to have to deal with it at some stage during his or her career.

The initial diagnosis may be difficult if the patient is in the early postoperative phase or if the eye has suffered recent trauma. Weakness may not be profound if a detached muscle retains some function through the muscle sheath or adjacent Tenon's capsule; indeed, many eyes have greater than 10° of ductions beyond the midline in the direction of action of the detached muscle. Clinically a detached muscle should be suspected if there are reduced ductions associated with widening of the palpebral aperture and exophthalmos in the direction of gaze of the affected muscle. Saccadic velocity and active force of the muscle are also reduced.

A detached rectus muscle falls into one of two categories. The slipped muscle is one which has been surgically disinserted and reattached to the sclera but has retracted within its Tenon's capsule which itself remains attached to the sclera; 90% of these can be successfully reattached.¹ The lost muscle has lost all attachments to the globe; in Plager and Parks series² only one out of 10 lost medial rectus muscles was found at surgery. The vertical recti and the lateral rectus retain attachments to the oblique muscles via the intermuscular septum and these muscles may be located by first finding the nearby oblique muscle and pursuing its attachments. The medial rectus, however, has no such attachments and may thus more easily recoil through the posterior Tenon's capsule into the orbital fat; blind searching for a lost muscle can lead to laceration of the posterior Tenon's capsule and subsequent adherence syndrome due to the prolapse of intraconal fat.

Computed tomographic scanning can help to localise the lost muscle preoperatively and, if surgery is carried out without atropine premedication, the oculocardiac reflex is a useful indication that a piece of tissue is harbouring the lost muscle. Some authors recommend the use of the operating microscope for identifying the sleeve of Tenon's capsule down which the muscle has vanished.

The timing of surgery is a compromise between allowing recovery of the muscle which has been traumatised or has undergone surgery but not allowing enough time for contraction of the antagonist muscle to occur. If surgery is delayed then this muscle will certainly need to be recessed and then any subsequent transposition surgery must be deferred to allow the anterior segment vasculature time to recover.

Careful removal of the anterior Tenon's capsule overlying the muscle tendon and the use of full thickness locking suture bites can help to minimise the incidence of slipped muscle. Cleaning of the muscle posteriorly is not necessary and the preservation of the intramuscular septum assists in the tracing of a subsequent lost muscle.

In this issue MacEwan, Lee and Fells present a paper which discusses the aetiology and management of the detached rectus muscle. The authors present their personal experience of 17 cases. They propose a new and useful classification of lost muscle which is based upon the mechanism of loss. Arguments are put forward for early exploration of a lost or slipped muscle and also for the timing and execution of effective transposition surgery which avoids anterior segment ischaemia.

R HARRAD

- 1 Plager DA, Parks MM. Recognition and repair of the slipped rectus muscle. *J Paediatr Ophthalmol Strabismus* 1988; 25: 207-74.
- 2 Plager DA, Parks MM. Recognition and repair of the 'lost' rectus muscle. A report of 25 cases. *Ophthalmology* 1990; 97: 131-7.