Sling Markers in Scleral Reinforcement Surgery

G.R. Brian, M.D., Ch.B.
F.C. Hollows, F.R.C.S.

ABSTRACT

Scleral reinforcement surgery requires a long-term controlled study to establish its efficacy in arresting the blinding complications of pathologic myopia. Only those cases with proven scleral sling reinforcement of the posterior pole should be included in such a study. Tantalum graft markers allow postoperative verification of sling position, and the exclusion of those cases with inappropriately placed reinforcement grafts.

Curtiln and Thompson, among others, have contributed long-term results of scleral reinforcement surgery for pathologic myopia. The discrepancy in their results has been attributed to graft design and placement differences.3

Curtiln has produced experimental evidence of correct sling position over the macula.4 However, we are aware of only one report of operatively confirmed correct posterior pole positioning of a scleral graft, 10 years after the initial surgery.5

Our department has used Thompson’s technique for a number of years, during which time one sling was inadvertently placed through a split inferior oblique muscle. A gross strabismus ensued, leading to exploration and remedy of the error. The incorrect positioning in this case became obvious postoperatively.

But what of the sling apparently in good position at the end of surgery? Thompson3 implies that the location may be ascertained postoperatively with computerized tomographic scanning. We have often found this unrewarding.

To examine the postoperative posterior pole position of slings, we suggest using tantalum (retinal detachment or cerebral aneurysm) clips attached to the scleral graft. This may be accomplished by firmly clamping two or three aneurysm clips (using a dispenser) at intervals transversely across the graft strip in the region which will reinforce the posterior sclera. We are aware of the problems of intrusion, i.e., exoplant and retinal tack, involved in retinal surgery; however, to date, we have experienced no such problems, perhaps because conjunctival cryotherapy and diathermy are not used, and the graft (and clips) is not sutured under tension to the underlying sclera. If intrusion is feared, then the clips may be fixed to the outer leaf of a partial-thickness transverse split in the sling. This places a further thickness of normal sclera between the clip and choroid. Secured in either of these ways, slippage of the clips along or off the graft, giving the impression of graft movement, is unlikely.

The clips appear to cause no associated morbidity, do not affect magnetic resonance imaging,8 and allow easy localization of the sling with CT scanning.

The Figure illustrates the usefulness of this technique. An uneventful operation was performed on this patient, with the sling seemingly over the posterior pole. Postoperatively, there was a full range of ocular movements and no diplopia. There was nothing to suggest malposition (and the patient would have been followed with anticipation). However, the central sling
Confirmation of sling position postoperatively with this technique will allow exclusion of such malpositioned grafts from long-term follow-up in the evaluation of scleral reinforcement.

REFERENCES


---

**Wanted: New Ideas and Personal Experiences with Illness**

Approximately a year ago *Ophthalmic Surgery* initiated a new department called New Ideas. In this section we published provocative, controversial, and original ideas intended to stimulate discussion and research. Such contributions are welcome from all sources—students, residents, and fellows are especially encouraged to send in their ideas.

Recently another section called Insights, devoted to the publication of personal descriptions of visual disorders by affected physicians, also was inaugurated. These contributions can be of remarkable value, not only because of the observational sensitivity and accuracy of the physician, but also because they provide unique insights into what patients think and feel. Physicians are urged to share these important experiences with their colleagues.