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Moorfields Eye Hospital,
City Road, London
EC1V 2PD
J D Stevens
A M P Hamilton

Correspondence to:
Julian D Stevens, FCOphth,
Moorfields Eye Hospital, City
Road, London EC1V 2PD.

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Displaced intraocular lens repositioning using a reversed 10-0 straight polypropylene needle lasso technique

J D Stevens, A M P Hamilton

Figure

Displacement of a posterior chamber intraocular lens (PC-IOL) may be a serious complication¹ and surgical repositioning or replacement may be required. Repositioning of a PC-IOL with suture fixation may be necessary and a number of techniques have been described.²⁻⁷ Recently, pars plana entry site techniques have used vitrectomy with PC-IOL repositioning through a single sclerostomy incision.⁸ We have employed a reverse suture technique using a straight needle, which is easily manipulated and allows rotational lassoing within the eye. Repositioning and suture fixation are performed using only one sclerostomy entry site.

Case reports

CASE 1

A man with previous ocular blunt trauma, angle recession, and cataract underwent left extracapsular cataract extraction with PC-IOL implantation. Absent zonules were noted from 1 to 3 o'clock and anterior vitrectomy was performed with a PC-IOL placed into the ciliary sulcus with haptics at 5 and 11 o'clock. Fixation was not stable, however, the PC-IOL being displaced inferiorly on the first postoperative day with the superior lens haptic visible in the pupil. The lens was repositioned by the reverse suture technique (see Fig) using a 10-0 polypropylene suture (13049 Lewis SC-5/AUM 10-0 12 inch polypropylene, Alcon) mounted on a straight needle. This was successful, with 6/9 best visual acuity and good lens centration, which has been maintained over a 9 month postoperative review period.

CASE 2

A man had extracapsular cataract extraction with

PC-IOL implantation complicated by vitreous loss. Anterior vitrectomy was performed and a PC-IOL implanted with good initial result, but after 8 weeks the lens was displaced inferiorly. Only the superior haptic loop was visible in the undilated pupil. The reversed suture technique was used to draw the PC-IOL upward, entry being 1.0–1.5 mm posterior to the limbus.⁹ The lens was found to be free of vitreous adhesion, so vitrectomy was unnecessary. Excellent centration was achieved, and at the first postoperative day visual acuity was 6/6 unaided.

Comment

This technique of repositioning and fixing the

haptic of a PC-IOL is suitable where a loop is visible in the pupil and can be lassoed by the 10-0 polypropylene suture. The needle shaft facilitates guiding of the polypropylene suture over the haptic and simple rotation of the needle with twisting of the polypropylene noose, allows gentle traction to be applied. A curved needle shaft cannot be so easily rotated in such a fashion within the eye. Controlling the straight needle shaft may become difficult if the length of needle shaft within the eye is long and fixation is upon the very tip of the needle shaft.

In both cases, anterior vitrectomy was not performed at the time of repositioning since it had already been completed at the time of PC-IOL implantation. In the first case, owing to the presence of angle recession, the external entry site was 1.5 mm posterior to the limbus to aim for suture fixation at the ciliary sulcus.

The burying of the polypropylene suture under a scleral flap attempts to minimise risk of potential fistula formation between the posterior chamber and the subconjunctival space. A permanent polypropylene foreign body track through from subconjunctival space to inside the globe has implications for potential infection.¹⁰ Covering the polypropylene by the scleral flap entombs the suture from the ocular surface.

For a displaced PC-IOL, where the end of the lens haptic is visible through the dilated pupil, the technique described offers a closed method for repositioning and fixation by a sling loop. It seeks to minimise risk to the patient by performing repositioning and fixation as a closed procedure.

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