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Sir,

Delayed radial keratotomy dehiscence following uneventful phacoemulsification cataract surgery

A 73-year-old female was referred with cataracts. Bilateral radial keratotomy (RK) had been performed 9 years previously for high myopia; on her left eye this had been supplemented with astigmatic keratotomies. Best-corrected visual acuities were 6/36 right eye and 6/12 left eye. She had bilateral moderate nuclear sclerotic cataracts. Fundoscopy showed healthy discs with a right epiretinal membrane and normal left macular. She chose to have left cataract surgery following detailed discussion with specific mention of complications associated with previous RK.

Routine phacoemulsification cataract extraction was performed under subtenons anaesthesia. The clear corneal main incision was located temporally between RK incisions and was secured at the end of the procedure with a single 10/0 Vicryl suture. She was examined before discharge and had a deep anterior chamber and negative Siedel's test. Acetazolamide 250 mg was given for postoperative IOP prophylaxis.

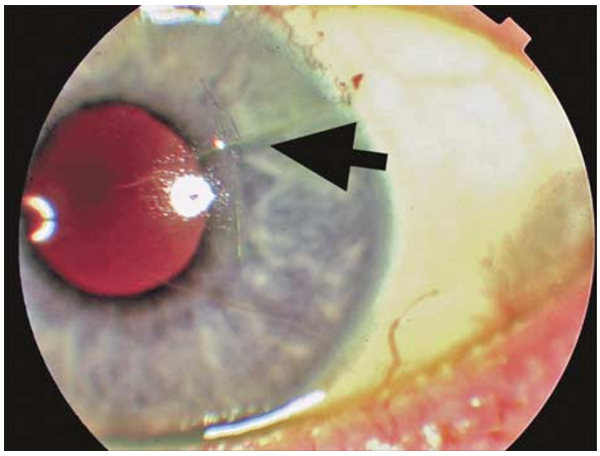

Figure 1 Sutured radial keratotomy incision with bandage contact lens *in situ*.

Day one review showed a shallow anterior chamber with two Seidel positive temporal RK incisions. She was taken to theatre and one incision closed with a 10/0 nylon suture and a bandage contact lens inserted (Figure 1). Four months postoperatively her visual acuity is 6/6 with refraction $-0.25/-2.00 \times 7.5$

Comment

Previous RK not only complicates intraocular lens power selection due to unintentional postoperative hyperopia and postoperative hyperopic shift,[1] but can also reduce corneal tensile strength. RK incision dehiscence has been reported during phacoemulsification cataract surgery[2–4] corneal transplantation[5] and following blunt trauma including car airbag inflation.[6] Previous reports suggest considerable variability in corneal strength following RK.[2–8]

We are aware of three published cases of RK incision rupture *during* phacoemulsification cataract surgery. Budak *et al*[2] reported RK incision dehiscence in a patient who had RK 11 months before cataract surgery. This occurred during construction of a 3.0 mm incision that intersected one of the radial incisions. Following suturing of the wound, the remainder of the procedure was uneventful. In the other two cases, RK dehiscence occurred during the phacoemulsification stage.[3,4] In all cases there was very good visual rehabilitation.

The reason why delayed RK dehiscence occurred in our patient is not known. The astigmatic keratotomy incisions traversing radial cuts will have further weakened the cornea compared with simple RK. As trauma to the eye is unlikely because the clear shield was only removed at the day one examination, we speculate

that tension from the temporal suture or a postoperative pressure rise may be responsible.

We recommend the following to reduce the risk of RK dehiscence for patients undergoing cataract surgery. While a clear corneal incision may be acceptable if there is sufficient distance between the RK incisions for one to be made without intersecting an RK incision, a scleral tunnel should be considered.[2,4] The advantage being the internal wound will be further away from RK cuts compared to that of a corneal incision. The scleral tunnel should be sufficiently short so that the cornea is not distorted per-operatively, but also long enough that the internal wound is far away from the RK incisions. If a corneal incision is used and there is an astigmatic keratotomy incision parallel to the main wound, suture closure of the main wound should only be used if essential. Postoperative topical or oral intraocular pressure prophylaxis should be considered to help prevent pressure spikes. Patients should have a first day postoperative review, even if their surgery is uneventful, to look for delayed RK dehiscence as occurred in our patient.

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Sir,

Adherence to College biomerty guidelines

One of the purposes of the National Biometry Audit[1] was to enhance awareness of the Royal College guidelines on biometry formulae. It is therefore worth highlighting that the guidelines stated in the National Biometry Audit II[2] are not the most up-to-date ones from the College. The current guidelines[3] suggest, among other possibilities, that the SRK/T formula may be used for all axial lengths. The ease of using one formula for all patients is likely to make compliance with the guidelines even better.

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Sir,

Adherence to college biometry guidelines

Thank you for your observation that the Royal College of Ophthalmologists (RCOphth) guidelines on IOL formulae quoted in the National Biometry Audit II paper[1] are not the same as the current RCOphth guidelines.[2] This is because the guidelines changed in the interval between acceptance of this paper and its publication. While all modern formulae achieve good