



Fig. 1. Topographic astigmatism (simk readings) preadjustment and at 3, 6, and 12 months follow-up.

difference in the healing process between keratoconic and non-keratoconic patients. In view of these findings, we have now abandoned the SCS technique in patients with keratoconus. In one of our patients the loosening of the suture resulted in corneal abscess and subsequently collapse of the graft. Chell *et al.* also reported on one patient with corneal abscess and decompensation but they did not comment on the cause of that.

It is also interesting to note that in the reported study the median time for removal of the SCS is greater in the adjusted group (104 weeks) than in the non-adjusted (76.5 weeks). This is very different from our observations that show a mean time of suture removal of 26 weeks (range 2–52 weeks). We agree with the authors' finding that long-term astigmatic drift (LTAD) is to be expected in most patients of the adjusted group. We have been able to show this within the first year of follow-up (Fig. 1). Our mean 12 month astigmatic result using corneal topography (simk readings) has shown an increase compared with the mean topographic astigmatism at 6 months, likely to be related to the SCS removal. Although Chell *et al.* have shown better long-term astigmatic results in their study than us, and we congratulate them on this, we presume that their cylinder measurement (DC) is based on manifest refraction rather than on keratometry or corneal topography, and this may result in underestimation of the magnitude of astigmatism.

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References

1. Chell PB, Hope-Ross MW, Shah P, McDonnell PJ. Long-term follow-up of a single continuous adjustable suture in penetrating keratoplasty. *Eye* 1996;10:133–7.
2. Serdarevic ON, Renard GJ, Pouliquen Y. Randomized

clinical trial comparing astigmatism and visual rehabilitation after penetrating keratoplasty with and without intraoperative suture adjustment. *Ophthalmology* 1994;101:990–9.

Sir,

We thank Dr Karabatsas and Mr Cook for their comments on our paper 'Long-term follow-up of a single continuous adjustable suture in penetrating keratoplasty'.

The numbers of patients with loose and broken sutures are shown in Table I, along with relevant data on diagnosis and the presence or absence of suture removal. It should be noted that in keratoconic patients in the adjusted group 5 sutures broke and 2 remained intact, but no sutures were loose. In the non-adjusted group 3 remained intact, 3 broke and 2 became loose. The loose sutures required removal at 52 and 69 weeks respectively, and did not follow any form of adjustment. Karabatsas and Cook also commented on the patient excluded from this study because of decompensation and subsequent bacterial abscess formation. This 85-year-old patient with pseudophakic bullous keratopathy was not adjusted post-operatively. The suture remained intact and showed no sign of loosening.

Karabatsas and Cook do not include surgical details in their letter, which makes it difficult for us to compare their methods with ours – in particular whether torsional or anti-torsional sutures are used and in general other methods of their graft technique. The one difference which is reported is their use of a 24-bite 10/0 nylon compared with our 16-bite 10/0 nylon. This increased number of bites, and incumbent increased suture material, may be causing some of the loosening they are experiencing in the post-operative period. It could, therefore, also be implicated in their earlier suture removal time of 26 weeks (range 2–52 weeks) compared with ours at 104 weeks (range 32–144 weeks) for the adjusted group and 76.5 weeks (range 52–130 weeks) for the non-adjusted group. They give no comparative figure for non-adjustment. Karabatsas and Cook refer with

Table I. Suture removal with or without adjustment and according to diagnosis

Diagnosis	Intact sutures (<i>n</i> = 14)		Sutures removed (<i>n</i> = 16)	
	Adjusted	Not adjusted	Adjusted	Not adjusted
Scar (<i>n</i> = 2)	0	0	0	2 (B)
PBK (<i>n</i> = 8)	5	1	1 (B)	1 (B)
Keratoconus (<i>n</i> = 15)	2	3	5 (B)	3 (B), 2 (L)
HSV (<i>n</i> = 1)	0	0	1 (B)	0
FED (<i>n</i> = 4)	1	2	1 (B)	0

PBK, pseudophakic bullous keratopathy; HSV, herpes simplex keratitis; FED, Fuchs' endothelial dystrophy; (B), broken suture; (C), loose suture.

interest to our earlier suture removal within the non-adjusted group compared with the adjusted group: no statistical difference was reported and a value of $p = 0.43$ was clearly given to validate this statement.

Whilst our only patients with loose sutures were patients with keratoconus we do not feel that this necessitates a change in our practice as they are not statistically significant. We agree that differences in absolute levels of astigmatism will differ between the refractive values used in our study and topographic simk readings used by Karabatsas and Cook. We used refraction as the definitive assessment of astigmatism, as this is the most relevant test in terms of the patient's visual rehabilitation.

In conclusion, we do not concur with the problems reported by Karabatsas and Cook, and find the use of single continuous adjustable suture a safe, effective and eminently reversible technique for patients with all these preoperative conditions in non-vascularised corneae, including keratoconus.

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Sir,

I read with interest Mr McKibbin's article on the prevalence of medical disease amongst patients attending pre-operative clinics prior to ophthalmic surgery.¹ The article implies that pre-operative clinics are simply to decide on the fitness for surgery/anaesthetic, the identification of non-ophthalmological disease not being part of their remit.

Most of the studied patients were elderly, only 11 being under 60 years old. The study found 71% had significant medical conditions and almost half of these 'had neither a history nor signs of pre-existing disease'. Although only 1 of the 105 patients had their surgery postponed, abnormal results were

found in 77 of 318 investigations performed. The finding of: uraemia (10 patients), poor glycaemic control (10 patients), uncontrolled hypertension (6 patients), iron deficiency anaemia (2 patients), unexpected electrocardiographic evidence of myocardial ischaemia (4 patients) and arrhythmias (25 patients) suggests that much disease and side effects of treatment among elderly patients could be better managed.

The paper illustrates that elderly patients often have unsuspected and/or poorly controlled medical conditions and pre-operative clinics provide an opportunity for a medical review. The abnormal results reported by this study may only rarely influence the timing and choice of surgery/anaesthetic but they are highly significant for the patient's wellbeing. As doctors, ophthalmologists have a responsibility for the general health of the patients under their care in addition to their surgical management and should use pre-operative clinics to review non-ophthalmic treatments and disease.

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Reference

1. McKibbin M. Pre-operative assessment and investigation of ophthalmic patients. *Eye* 1996;10:138-40.

Sir,

I thank Dr Paul Diggory for his interest in my article and for his comments.

The pre-operative assessment clinic exists to obtain a medical and social history relevant to the surgery, to educate and reduce anxiety and to obtain informed consent. Pre-operative investigations may be helpful in assessing chronic disease, but care should be taken not to place too much emphasis on isolated measurements. Although urinalysis and blood pressure estimation are necessary for all patients, detailed screening for medical disease should not be part of the remit. This is best