

Sir,
Comparative cohort study of the outcomes of deep lamellar keratoplasty and penetrating keratoplasty for keratoconus

I congratulate the authors, CL Funnell *et al*¹ for publishing the outcomes of their keratoplasty surgery. I would like to make the following comments:

I do partial trephination of the cornea before lamellar dissection and find this step helps to limit the surgery, to the required area.

I note that five patients in each group required resuturing of the corneal graft. I would be interested in knowing the reasons of this complication. I tend to use single continuous sutures in my deep lamellar surgery and tie the sutures reasonably tight. Fortunately, I did not have to resuture any of my nine deep lamellar patients. In my experience, I found that the donor and the recipient suture bites may have to be at different depths so as to avoid a 'step'.

At present, we are conducting a prospective study measuring the residual stromal/Descemet's bed thickness and correlating with the visual outcome.

References

- 1 Funnell CL, Ball J, Noble BA. Comparative cohort study of the outcomes of deep lamellar keratoplasty and penetrating keratoplasty for keratoconus. *Eye* 2006; **20**: 527–532.

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Sir,
Reply to letter from Mr Ilango: comparative cohort study of the outcomes of deep lamellar keratoplasty and penetrating keratoplasty for keratoconus

We thank Mr B Ilango for his interest in this article.¹
 In response to his specific comments:

Marking the cornea before lamellar dissection or performing a partial trephination does allow the area of lamellar dissection to be reduced. However, extending the lamellar dissection well beyond the trephination margin allows Descemet's membrane to be pushed further back from the stroma with HealonTM reducing the risk of inadvertent full thickness penetration during trephination.

We agree that in order to achieve a good anterior contour to the cornea the suture bites in donor and recipient may need to be at different depths, with the suture exiting the donor at two-thirds thickness and entering the recipient within the lamellar pocket, that is, almost full thickness.

Graft resuturing was required for five patients in each group. Over tightening of the sutures was avoided in order to reduce the amount of early astigmatism but the cost may have been early suture loosening in these patients. Suture tightening is always a matter of judgment and although strain gauge forceps have been developed² we are unaware of any good evidence to show that these have impacted on resuturing rates. In the subsequent 100 deep anterior lamellar keratoplasties we have performed since this paper was written, the rate of resuturing required has been less than 5%.

We wish Mr Ilango well with his prospective study of visual outcomes and dissection depth in deep anterior lamellar keratoplasty.

References

- 1 Funnell CL, Ball J, Noble BA. Comparative cohort study of the outcomes of deep lamellar keratoplasty and penetrating keratoplasty for keratoconus. *Eye* 2006; **20**: 527–532.
- 2 Talbot EM, Thorpe AW, Mushtaq I. Controlled-tension suture tying forceps. *JR Coll Surg Edinb* 1991; **36**: 328–330.

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