

Simple Innovative Measures for Ease of Corneal Foreign Body Removal

Dear Editor,

Removal of embedded corneal foreign body (ECFB) is usually done with a small hypodermic needle bevel or using the burr.^{1,2,3} It would be easier removing ECFB with bent bevels rather than straight ones. Bending the bevelled end requires a needle holder or forceps and can be challenging and time consuming in a busy eye casualty setting. Here, we describe a simple time saving technique to bend the bevel (without requiring any special instruments) and describe the ease of removing ECFB with it successfully.

Technique/Methods

Our technique involves using two standard needles, one bigger calibre than the other. The smaller bevel (e.g. 25G) is inserted into the hollow tip of a bigger bevel (e.g. 21G) (Fig. 1A) and then the sharp tip of the smaller bevel is bent to 90 degrees (Fig. 1B). The finished product (Fig. 1C) is a neatly bent bevel for easier removal of ECFB.

The illustrations demonstrating the simplified method of removing ECFB were taken using an artificial rubber eye. Metal ECFB was embedded on the artificial cornea and with the finished product (Fig. 1C), we accessed the ECFB (Figs. 2A and 2B), under slit lamp. We routinely use this technique to dislodge the ECFB (Figs. 2B and 2C) with much ease.

Result

ECFB can be successfully removed with the bent bevel.

Discussion

The use of straight needle can be challenging in removing ECFB which may not be completely removed despite best efforts. The burr may be effective in removing ECFB, but can also cause extended corneal damage, which may delay healing and increase infection risk.^{1,2,3} The other advantage



Figs. 1A, B and C. (A) shows the sharp tip of the smaller bevel (25G) being inserted into the larger needle (21G). (B) shows the sharp tip from the smaller needle already inserted into the larger needle and then bent to a right angle. In (C), the bent tip of the smaller needle is ready to be used to remove corneal FB.



Figs. 2A and B. With the bent tip, it is easier to access the embedded corneal FB. Fig. 2C. Demonstrating the ease in dislodging the corneal FB.

of this technique is that it is safer as the risk of accidentally perforating the eye with the needle is negligible.

Our approach is simple, time saving, safer, low cost, yet effective in removing ECFB, without the need of any special equipment, in a busy eye casualty or Emergency Medicine department.

Lik Thai Lim,¹ *MB BCh(UK), MRCSed(Ophth), MAcadMed*, Ali Al-Ani,¹
MBBS, MRCOphth, FRCSG(Ophth), Kanna Ramaesh,¹ *MBBS, FRCSEd(Ophth),
 FRCOphth*

REFERENCES

1. Augeri PA. Corneal foreign body removal and treatment. *Optom Clin* 1991;1:59-70.
2. Santen SA, Scott JL. Ophthalmologic procedures. *Emerg Med Clin North Am* 1995;13:681-701.
3. Babineau MR, Sanchez LD. Ophthalmologic procedures in the emergency department. *Emerg Med Clin North Am* 2008;26:17-34,v-vi.

¹Tennent Institute of Ophthalmology, Glasgow, U.K.

Address for Correspondence: Dr Lik Thai Lim, Ophthalmology Department, Tennent Institute of Ophthalmology, Gartnavel General Hospital, Glasgow G12 0YN, UK.
 Email: likthai@doctors.org.uk