Discission needle

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Since 1805 when Saunders first advocated discission as the treatment of choice for congenital cataract, many instruments have been designed and used for this operation (Saunders, 1811; Ziegler, 1909, 1921). Some of them are not satisfactory for use in the surgery of congenital cataracts in microphthalmic eyes, either because of their size, or because of the difficulty in maintaining the anterior chamber.

More recently attention has been drawn to some of the principles governing the design of anterior chamber needles (Sutherland, 1969). To maintain a water-tight fit between the shaft of the instrument and the corneal wound it is important that the shaft should be round and of even diameter throughout. We have found it important that the circumference should be not less than twice the width of the blade (see Figure). The tapering connexion between blade and shaft must be short so that it can remain within the anterior chamber during dissection.

The instrument described was designed to facilitate the maintenance of the anterior chamber during full dissection of the lens capsule. We have been using it specifically for rubella cataract and have been able, if necessary, to maintain the anterior chamber for periods of 10 to 15 minutes. The track formed can be used to insert a cannula for infusion while the lens is aspirated from above.

SPECIFICATIONS

The instrument is made from a length of stainless steel wire 0.5 mm in diameter (circumference

*Instrument maker from the Royal Victorian Eye and Ear Hospital

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References

- SAUNDERS, J. C. (1811) 'A Treatise on Some Practical Points Relating to the Diseases of the Eye'. Farre, London
 SUTHERLAND, G. (1969) *Trans. Aust. Coll. Ophthalmol.*, **1**, 33
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approximately 1.57 mm); the dimensions are shown in the Figure. One end of the wire is soldered to a suitable handle (we used the handle from a dis-

FIGURE Note short connexion (a) contrasting with connexion in Ziegler needle (b). Circumference of shaft is = 1.57 mm in both needles. Discission needle wound circumference $\approx 2 \times 0.5$ mm; Ziegler wound circumference $\approx 2 \times 1$ mm. Leakage of aqueous is likely with Ziegler needle because puncture wound is larger than shaft

carded Saunders needle, and the other is flattened, tempered, and sharpened to produce the blade, which is 2 mm in length with a tapered connexion to the shaft of 0.5 mm.

Summary

A discission needle suitable for use in cataractous microphthalmic eyes and the principles governing its design are described. It enables extensive microsurgery of the lens capsule to be performed, with minimal loss of aqueous.