Sclerotomy forceps

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SUMMARY Forceps to facilitate the drainage of subretinal fluid are described.

It is widely accepted that the most frequent complications of retinal detachment surgery are choroidal haemorrhage and retinal incarceration associated with drainage of subretinal fluid.^{1,2} Many techniques designed to minimise these dangers have been described, in particular transillumination at the drainage site,^{3,4} diathermy of the choroid,⁴ and dissection under the microscope.⁵

In many instances where subretinal fluid drainage is indicated the use of such methods is made difficult or impossible by thickening and vascularity of the tissues after previous surgery and by the limited choice and posterior location of a suitable drainage site. Several authors have described ways of im-

proving visualisation of the choroid by dissecting triangular scleral flaps^{6,7} or retracting the wound lips with sutures⁶ or forceps,⁸ while to avoid incarceration Wilson designed a special twist grip fixation device.⁹

The forceps described in this paper are designed to engage the lips of a simple linear scleral wound and retract the opening during drainage of subretinal fluid (Fig. 1). As well as allowing excellent exposure in the depths of the wound while dissecting the sclera they can be used to hold the wall of the globe away from the retina during drainage, avoiding retinal incarceration and maintaining flow.

They have curved blades operating on the cross-action principle as previously advocated by Bovino,⁸ while two outward facing teeth are located 2 mm apart at the tip of each blade (Fig. 2). The blades

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Fig. 1 Formation of sclerotomy.

Fig. 2 Sclerotomy forceps—tips of blades.

open to a maximum of 2 mm, and the points of the teeth project outwards tangential to the scleral surface, so there is no danger of accidentally rupturing or perforating the globe. By simply turning the forceps over, the curve of the blades is designed to facilitate their use anteriorly or posteriorly, a separate set of teeth being incorporated on opposite sides (Fig. 2).

The forceps are available from Osborn and Simmons Ltd, 31 Clerkenwell Close, London EC1.

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References

- 1 Eifrig DE. Techniques for drainage of subretinal fluid. *Surv Ophthalmol* 1973; **17**: 348–56.
- 2 Humphrey WT, Schepens CL, Elzeneiny IL, Moura R. The release of subretinal fluid and its complications. In: Pruett RC, Regan DJ, eds. *Retina Congress*. New York: Appleton-Century-Crofts, 1974: 383–90.
- 3 Dominguez A. Puncture of subretinal fluid controlled by transillumination with fibre-optics. *Mod Probl Ophthalmol* 1975; **15**: 134–6.
- 4 Freeman HM, Schepens CL. Innovations in the drainage of subretinal fluid. *Trans Am Acad Ophthalmol Otolaryngol* 1974; **78**: 829–36.
- 5 Gartner J. Release of subretinal fluid with the aid of the microscope. *Mod Probl Ophthalmol* 1975; **15**: 127–33.
- 6 Hubner H, Boke W. Klinische und technische Aspekte der subretinalen drainage. *Mod Probl Ophthalmol* 1975; **15**: 137–42.
- 7 Johnston GP, Okun E, Boniuk I, Arribas NP. Drainage of subretinal fluid: why, when, where and how. *Mod Probl Ophthalmol* 1975; **15**: 197–206.
- 8 Bovino JA. Scleral spreading forceps for drainage of subretinal fluid. *Am J Ophthalmol* 1979; **87**: 721.
- 9 Spalter HF. Traction release of subretinal fluid. *Mod Probl Ophthalmol* 1975; **15**: 163–8.