

## Modified Charles flute needle

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**SUMMARY** An inexpensive modification of the flute needle is described for use in closed intraocular microsurgery.

The flute needle devised by Dr Steve Charles (Memphis, USA) is an invaluable tool for closed microsurgery of the posterior segment. It consists simply of a blunt-ended needle (of 20 gauge diameter when used in conjunction with the Ocutome system) connected by a Luer fitting or Luer lock to a handle. Within the handle an internal channel connects the male Luer terminal to an exit port in a depression on the side of the handle. When the needle is introduced into the vitreous cavity via a pars plana sclerotomy, closure of the exit port by the surgeon's finger prevents flow of fluid or gas from the eye. Removal of the finger allows egress of fluid along the needle and through the exit hole, provided an infusion of gas or fluid maintains the intraocular pressure above atmospheric. With a pars plana infusion terminal delivering fluid or gas to the anterior part of the eye, the Charles needle can be used for a variety of procedures, including 'vacuum cleaning' of sedimented blood from the retinal surface, manipulation of the flap of a giant retinal break, internal drainage of subretinal fluid through a hole in the retina, and simultaneous exchange of intraocular fluid for air, a gas/air mixture, or silicone oil.

The Charles flute needle available from distributors of the O'Malley Ocutome system is unsatisfactory in 2 respects—the exit port depression is too small and is sited too high on the handle, preventing fine control of fluid egress, and the price in the UK is exorbitant (almost £150.00).

We have modified the flute needle, siting the exit port on a mount on the handle adjacent to the Luer

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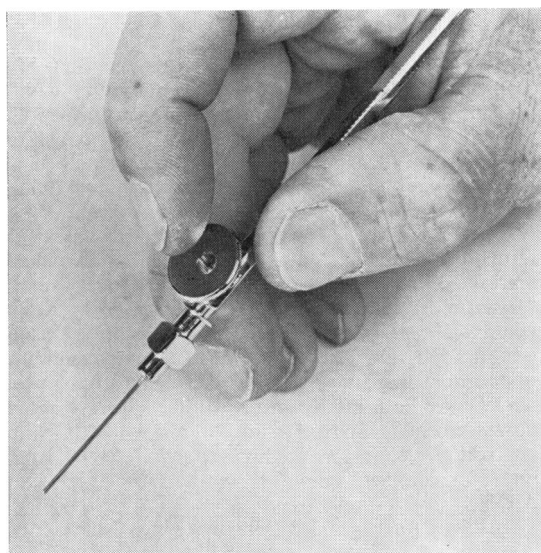


Fig. 1 *The modified Charles flute needle.*

fitting (Fig. 1). Precise control of fluid egress is thereby facilitated. The exit hole itself is designed to admit a male Luer fitting, so the internal channel and needle can be flushed with distilled water from a syringe prior to autoclaving.

The modified handle (supplied with a 20 gauge needle) is available from Needle Industries Ltd, Surgical Division, PO Box 3, Redditch, Worcestershire B98 7AB, and costs less than a tenth of the alternative instrument. Handles with Luer lock fitting or needles of different gauge are available on request.



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