The patient is then returned to the dressing room or operating room following x-ray studies, and the skin re-prepared. With the needles in the ventricles again, the tubing is transferred to the output (Fig. 4) and connected with the lower ventricular needle. The stilette is then removed from the upper ventricular needle while the flask is inverted and elevated above the level of the patient's head (Fig. 3). The oxygen will then escape through the upper needle while the fluid is replaced through the lower one. The height of the bottle should be approximately 12 inches above the lower ventricular needle, so that the replacement of ventricular fluid will be gradual.

SUMMARY

A method of replacing ventricular fluid following ventriculography is reported.

Emphasis should be placed upon thorough chemical cleaning of the flask and proper sterilization. The possibility for reactions is thus minimized.

This method has been used repeatedly in this clinic with satisfaction and without reactions to the procedure of ventriculography in cases of extreme hydrocephalus.

A REMOVABLE SUTURE METHOD OF NERVE REPAIR

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A successful nerve repair requires a minimum of fibrosis at the site of suture. All present day technique is directed towards the prevention of such fibrosis by careful hemostasis, the utilization of impermeable sleeves, and the use of non-irritating sutures.

The placing of an epineurial suture, even with the utmost care, often results in the piercing of the perineurium and superficial fascicles by the point of the needle. The result is scarring, augmented if a suture remains in the area. There is a cellular infiltration about the most inert of our present day sutures, tantalum.

A method of nerve anastomosis minimizing trauma to neural tissue and permitting of subsequent removal of all suture material would seem to be important in combating fibrosis. The method described in this report is a composite of suggestions submitted by the members of a neurosurgical section familiar with nerve repair. The basic idea is taken from the tendon "pull-out" suture of Dr. Sterling Bunnell.

Two repairs have been done by this method. The first has been reexplored and is now available for evaluation.

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Fig. 1. Gross pathology of the injury. There is an hourglass constriction of the nerve with neuromatous tissue proximally. Microscopic sections taken from this level show fibrous continuity only, with a few regenerating neuraxes penetrating the stroma. In all photographs the proximal nerve is at the left.

Fig. 2. Anastomosis completed. The tension sutures have been brought through the skin and secured over the buttons. The pull-out sutures have yet to be brought to the skin surface. Note that tension is in the axis of the nerve.

Fig. 3. Diagrammatic representation of the suture.

Fig. 4. The wound prior to closure. A tantalum scroll encloses the anastomosis and wires.

Fig. 5. Anastomotic site 57 days after suture. The foil has been removed to show the neo-membrane.
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Figs. 1–5. See opposite page for description.