METHOD OF VENTRICULAR FLUID REPLACEMENT

The difficulty of early diagnosis in this and similar cases should carry a note of warning, especially since remissions may occur during the development of neurological symptoms and signs which suggest denervating diseases of the spinal cord.

As to prognosis, ependymomas are usually slowly growing tumors, and do not tend to metastasize. They are, however, resistant to x-ray therapy, and hence the ultimate prognosis should be guarded.

The painful dysesthesias noted by this patient and others mentioned in the literature are apparently of spinal cord origin. This is worthy of note since there seems to be some controversy as to whether such a phenomenon exists. However, the pain experienced postoperatively in the present instance is similar to the burning dysesthesias felt “in the legs” of some paraplegic patients with traumatically divided spinal cords, and suggests abnormal stimulation of sensory pathways either by a pathological or physiological process, acting within the cord itself. Since effective pathological, physiological or operative interruption of the spinothalamic pathways too often fails to relieve this type of pain, such dyesthesia may well be due to abnormal neural volleys reaching the thalamus via other sensory pathways; i.e., via the intact portions of the dorsal columns immediately above the site of the cord lesion. These tracts may be stimulated pathologically by cicatricial traction or by changes in the local fluid or vascular milieu; or neurogenically, by disturbed sensory circuits.

SUMMARY

1. A case of intramedullary spinal cord tumor (ependymoma) at Th. 8–Th. 10 is reported.
2. Syringomyelic cavitation (perhaps multiple) was associated with the tumor.
3. Subtotal surgical removal of the tumor was accomplished.
4. Pitfalls of diagnosis are briefly discussed.
5. The significance of pain of intramedullary spinal cord origin is mentioned.

REFERENCES


METHOD OF VENTRICULAR FLUID REPLACEMENT FOLLOWING VENTRICULOGRAPHY

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A description of a method designed to replace ventricular fluid following ventriculography is presented. Replacement of ventricular fluid is often desirable in hydrocephalus of congenital origin, but more especially in those cases due to a periaqueductal stenosis. Attempts to lessen reactions, for example, by the use of oxygen instead of ordinary air, during and following ventriculography, are well recognized. Other methods for replacement of ventricular fluid also have been utilized.
MATERIALS NECESSARY

The ordinary equipment for ventriculography is required. In addition a 500 cc. pyrex washing bottle* with glass fitting stopper, as illustrated (Fig. 4) and 5 feet of plastic or rubber tubing are needed. One end of tubing should be fitted with a rough glass adapter to provide tight fitting with the ventricular needle (Fig. 5).

PREPARATION OF EQUIPMENT

The pyrex washing bottle is chemically cleaned with a standard “bichromate-sulfuric acid” solution.

The plastic tubing may be chemically cleaned, depending on the type of plastic material used. Rubber tubing should be washed thoroughly and soaked in distilled water overnight.

After equipment has been carefully chemically cleaned it is then autoclaved for 30 minutes at 20 pounds pressure and 260°F. and then wrapped steriley.

PREPARATION OF PATIENT AND VENTRICULOGRAPHY

Following the skin preparation, two posterior parietal twist drill or burr holes are inserted on either side of the midline. In extreme hydrocephalus in children whose cranial sutures have separated, two posterior parietal 1 cm. skin incisions may be all that is necessary. With the patient on the side, the ventricular needles (Fig. 5) are then inserted into both lateral ventricles (Fig. 1). The lower needle is connected with the flask at the intake as shown (Fig. 4),

* May be purchased from Fisher Scientific Co., Pittsburgh, Pa., Catalogue No. 3-406.

FIG. 1. Under local anesthesia 2 ventricular needles are inserted into the ventricles. To the upper needle is attached a two-way stop-cock, and to the lower needle is attached the chemically clean sterile plastic tubing, connecting the ventricular system with the flask.

and the oxygen is inserted into the upper ventricle by very light pressure (Fig. 2). A constant check should be made to insure an even stream of fluid from the lower needle. The chin may be rotated upward near the end of the procedure to facilitate a more complete drainage of the ventricles. The needles are removed, and the connection with the flask clamped. The flask and tubing are then wrapped in sterile covers and kept at room temperature while the patient is taken to the x-ray department for the ventriculographic series.