of pressure returned. Neither at the 1st nor at the 2nd hospital admission were there any focal symptoms or signs of localizing value.

SUMMARY

1. A case is reported of a 3rd ventriculostomy performed through the misinterpretation of a lesion exposed at operation.
2. There was postmortem proof that the ventriculostomy stoma remained patent for the 15 years that the patient lived.
3. In spite of the functioning stoma, the growth of the cerebellar tumor brought about a return of symptoms.
4. Operations designed to by-pass ventricular obstruction will find their greater use in static obstructions rather than those caused by progressive lesions.

REFERENCES


THE CRANIAL LOCALIZER

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The need for an instrument that can be used as a localizer in neurosurgical operations on the brain has been recognized. Such an instrument must be of light but sturdy construction. When applied to the head, it must not jeopardize the visualization of any portion of the calvarium. The instrument must be adjustable. When it is in position it must be so firmly attached that motion of the patient's head and the surgical drapes covering the head will not disturb the position of the localizer in any way.

We feel that we have designed such an instrument. We have designated it the "cranial localizer." The instrument is simply constructed and can be adjusted readily to the head of any patient (Fig. 1). A roentgenogram from the anteroposterior or lateral view is made first to check accurately the position of the instrument with relation to definite cranial bony landmarks. This roentgenogram of the cranial localizer superimposed upon the skull (Fig. 2) aids in localization of intracranial pathologic processes prior to operation. For teaching purposes, it seems to have special
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value as it assists the student to visualize the location of the cerebral hemisphere and the affected region in relation to the localizer, thereby facilitating the explanation of the rationale of various operative procedures.

The feature of this simply constructed instrument is that it is similar to any spectacle frame (Fig. 3). A square post on the bridge piece receives a round rod which is attached to the frame. This sliding joint permits vertical adjustment and it is secured by a thumbscrew. The temple bars terminate in balls which fit the external auditory canals. Thus the bridge piece over the nose and the temple bars, held in place by the balls fitted into the external canals, are fixed points when the localizer is on the head of the patient (Fig. 3). Each temple bar is joined to the frame by a spring steel arm bent to an angle of 90°. Each end of the spring has a block with hole and thumbscrew. One end of the spring fits on the frame while the other end receives the temple bar. This permits adjustment of the width of the frame as well as the length of the temple bars. A short vertical post is located on each temple bar about 1 inch forward (an arbitrary distance) from the external auditory canal. These short posts, which are perpendicular to the temple bars, receive a longer tubular rod to which extension tubes may be added if desired. The tubular rods may then be made to lie in a position.

After the localizer has been placed on the head of the patient adjustments must be made, by using the thumbscrews, to secure the cranial localizer properly to the head. These screws adjust the width of the frame and the length of the temple bars. By sliding the frame up or down on the vertical post on the bridge piece, the temple bars can be made to lie in a posi-
tion parallel to the floor of the anterior cranial fossa. It is possible to estimate this position by having the temple bars lie parallel to the downward slope of the distal third of the eyebrows at the outer canthi of the eyes. This slope of the eyebrows almost exactly parallels the slope of the floor of the anterior cranial fossa. A roentgenogram from the lateral view, with the localizer superimposed over the skull, permits final accurate adjustment of the localizer frame to the desired position (Fig. 2). When the temple bars are parallel to the floor of the anterior fossa the upright tubular posts will be parallel with, although posterior to, the coronal suture. In this position the vertical tubular rods do not impede the surgeon and the localizing value is increased.

This instrument has been used in several types of neurosurgical cranial operative procedures, particularly in prefrontal lobotomy. Its value in this operative procedure has been discussed in a recent publication.1 It has been used by surgeons other than the senior author. Favorable comments prompted the authors to prepare this report. It is believed that the cranial localizer can be a valuable aid to the surgeon, his assistants and students in the localization of craniotomy procedures. This is a preliminary report; some modifications already have been made and will be included in a later report.

SUMMARY

An adjustable apparatus called the "cranial localizer" has been described which, the authors feel, offers considerable assistance as a surgical guide in carrying out various cranial neurosurgical procedures. The apparatus is of simple construction, is lightweight and can be sterilized in its entirety or in parts. When placed on the head of the patient it cannot be readily dislodged even with the operative field surrounded by sterile drapes. The cranial localizer will assist the surgeon to identify quickly skeletal and intracranial landmarks that are so important in the execution of a successful neurosurgical intracranial procedure.

REFERENCE