The general and neurological examinations were essentially negative. X-ray examination revealed complete recalcification of the sella turcica (Fig. 5).

COMMENT

The original infestation in this case probably took place in the United States inasmuch as calcification of other larvae was present at the time of operation, which was only about 18 months after his arrival in Egypt. As a general rule calcification does not occur for from three to six years after infestation.

The diagnosis was not made preoperatively. On review of the x-ray films of the chest the calcified areas noted in the mediastinum are still indistinguishable from calcified nodes. The patient gave no history of symptoms suggestive of the disease. This is not uncommon as the tissues are quite resistant to live larvae, and it is only after they die that a more intense local reaction occurs. If there are subcutaneous lesions, a common occurrence, the presence of palpable pea-sized nodules together with recovery of the adult worm in the stool makes the diagnosis evident. In their absence, however, diagnosis is difficult until calcification has occurred.

The cyst Presenting was associated with the leptomeninges. It was impossible to accomplish the ideal, the removal of all the cyst wall, because of its inaccessibility. Inasmuch as there had been no evidence of recurrence nine months after operation, it is assumed that this particular cyst has been eradicated. When convulsions or other signs of central nervous system disease develop in an adult who has served with the armed forces in the Middle East and India, a diagnosis of cysticercosis must seriously be considered.

SUMMARY

1. A case of cysticercus cellulosae of the brain is presented with surgical removal and with no evidence of recurrence nine months afterward.

2. Inasmuch as many men will be returning from foreign soil where Taenia is prevalent it is important to keep this condition in mind when signs and symptoms of central nervous system disease develop.

REFERENCES


A NEW POSITION FOR FRONTAL CRANIOTOMY*


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(Received for publication June 20, 1945)

Recently in considering the surgical exploration of the circle of Willis for a suspected aneurysm, it seemed worthwhile to try a new method of approach in the hope of improving

* This article has been released for publication by the Division of Publications of the Bureau of Medicine and Surgery of the U. S. Navy. The opinions or assertions contained herein are the private ones of the writers, and are not to be construed as official or as reflecting the views of the Navy Department or the Naval Service at large.
visibility in the region about the optic chiasm. A head rest was developed (Fig. 1) which securely held the head in such a position that the floor of the anterior fossa was in a horizontal rather than vertical plane. The patient was placed on his abdomen with the neck extended so that the patient's face was toward the surgeon (Fig. 2), much as one would lie on the floor to read with the face held between the hands. The position proved so satisfactory that we have continued to employ it for all operations in the frontal region (Fig. 3). In spite of the unorthodox method of fixation of the head and the hyperextension of the neck, there has been no postoperative complaint of soreness of the face or stiffness of the neck.

The conventional position for transfrontal craniotomy is with the patient's head resting on the occiput with the face up. In spite of the apparent success of this method through the years, it is not difficult to find obvious technical disadvantages that can be improved by altering the position of the patient's head. In the conventional position, as the skin and bone flaps are reflected they must be turned upward and anchored to the drapes. When wrapped in
wound towels, they form a bulky mass which occupies valuable space. It is often difficult to drill the anterior burr holes without striking the handle of the Hudson burr on the drapes.

With the horizontal position, the skin and bone flaps fall forward out of the operative field. Drilling of the anterior burr hole is free from the usual difficulty.

Fig. 2. Position of patient, showing method of fixation of head.

Fig. 3. Patient in position for right transfrontal craniotomy. Adjustable metal shield supports drapes and allows adequate space for anesthetist.

When looking directly down along the vertically placed floor of the anterior fossa visibility about the optic chiasm can only be obtained by considerable retraction of the frontal lobe. The exposure represents a V with proportionately greater exposure at the surface than
at the base. With the head so placed that the floor of the anterior fossa is horizontal, the degree of exposure at the tip of the retractor can be greater than at the surface and still maintain excellent visibility (Fig. 4).

![Diagram of optic chiasm and surrounding structures](image)

**Fig. 4.** Illustrates maximum exposure of chiasm without excessive retraction of frontal lobe.

In the usual position, exploration of the posterior portion of the chiasm requires the operator to bend far forward, whereas in the horizontal position, with the table elevated, visibility is directly at eye level (Fig. 5). It also allows the assistants to see equally well and thus be of greater help in the operative procedure.

![Diagram of circle of Willis](image)

**Fig. 5.** Drawing made from actual exposure of circle of Willis. Angle of the floor of the anterior fossa allows blood and spinal fluid to gravitate from operative area.

If the head is so fixed that the floor of the anterior fossa slopes slightly forward, all fluid will gravitate from the operative field. Saline for irrigation will run out without the use of suction as will blood which otherwise would accumulate at the bottom of the wound. Even
extensive local hemorrhage will not obstruct visibility such that the bleeding point cannot be located.

Having observed fifty consecutive patients operated upon in this position, it is our impression that the postoperative course is greatly improved. Possibly this reduced reaction is due to the fact that blood does not gravitate into and fill the basal cisterns and subarachnoid space as it must do in the conventional position.

During operation in this position an excessive amount of mucus drains out of the mouth along the intratraeheal tube. How much of this passes into the tracheobronchial tree when the patient is lying on his back cannot be determined, but it seems logical that it is better to have it gravitate out along the tube than to rely solely on the use of suction to remove this accumulated secretion.

This position is particularly well suited to the treatment of subdural hematomas and brain abscesses. The drapes can be so arranged that the operative field includes both frontal, temporal and parietal areas. Bilateral exploration can be done without altering the position or redraping the patient's head. Furthermore, drainage of both hematomas and abscesses is aided by gravity.

It is hoped that the use of this position will improve the surgical exposure of the optic chiasm and circle of Willis, as well as aid in the repair of skull defects and exploration of lesions of the orbit and frontal lobe.*

The technical assistance of Mr. John S. Bronson is gratefully acknowledged.

PERIPHERAL NERVE LESION CHARTS

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(Received for publication July 24, 1945)

For the examination and study of peripheral nerve lesions it is important to have simple and accurate outlines of the areas of anaesthesia, high skin resistance, etc. The body charts that have been available for this purpose have a number of serious shortcomings. In the first place they usually show only the front and rear views of the extremities, leaving large blind areas along the lateral and inner surfaces. Second, the positions of the arms and hands are often unnatural and uncomfortable and almost impossible for men with peripheral nerve lesions to hold at all. Third, they do not show any landmarks, without which it is very difficult to transfer the outlines of the affected areas to the chart with any degree of accuracy.

During the past two years, while making skin resistance studies on patients with peripheral nerve lesions at the Walter Reed General and Johns Hopkins Hospitals, we experimented with a number of charts. A series of charts were finally designed which do not have the aforementioned shortcomings.

Fig. 1 shows the chart for the right upper extremity. The central drawings give the front and rear views of the forearm with the forearm flexed at right angles. Most patients with peripheral nerve injuries can easily hold their arm in this position even though they are unable to let their forearms hang freely at the side of the body. This position does not show the posterior and anterior surfaces of the arm, the ulnar and radial surfaces of the forearm, nor the lateral and medial surfaces of the fingers. All of these areas are shown in the drawings at the two sides of the chart in which the forearm hangs freely at the side of the body with the

* The head rest will be available through the American Sterilizer Company, Erie, Pennsylvania.