REMoval of bullet from the brain by gravity

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In an excellent historical review of the literature and a report of personal experiences, Wood6 emphasized that spontaneous movement of metallic foreign bodies in the brain is strongly suggestive of abscess formation. Other authors1-5 have discussed the use of gravity in attempting to bring about migration of metal objects to surgically more accessible regions of the brain. Varying degrees of success have been reported. However, we have been unable to find a report of successful movement of a bullet by gravity alone from a point within the brain to a position beneath the scalp. This is a report of the movement of a bullet from a location 8 cm. within the brain to a position beneath the scalp where it was easily felt and removed. This occurred without the formation of abscess or hematoma.

CASE REPORT

B.M., a Latin American male aged 7, was admitted to Parkland Hospital on July 28, 1952, within 30 minutes after having been wounded by a pistol bullet.

Examination disclosed no neurological abnormalities. Radiographs (Fig. 1) showed the bullet to have entered the parietal region of the skull approximately 2½ cm. anterior to the lambda and 2½ cm. to the left of the midline. A few small fragments of metal were left in the surface of the brain near the skull wound but the major portion of the bullet ranged downward, forward and slightly laterally, coming to rest in the left temporal lobe of the brain 8 cm. from the point of entry through the skull.

The wound was debrided with removal of small metal and bone fragments from the brain but no attempt was made to remove the major fragment of bullet in the temporal lobe. The dura mater was left open but the galea was closed tightly with silk sutures.

[Dr. H. F. Brewster, who was chief of surgery at Navy 128, Pearl Harbor, T.H., in January 1944, told one of us (L.B.B.) that it was possible to remove bullets by gravity, and at that hospital and at that time there were 2 cases in which bullets were removed by gravity.]

During the next 12 days, the patient was kept on his back as much of the time as was possible without using restraint, and the foot of the bed was elevated. This was done to place the bullet nearly vertically above the point of entry. At the end of 12 days, the bullet could
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be felt beneath the scalp and radiographs made 14 days afterward (Fig. 2) showed the bullet to lie outside the skull beneath the scalp. It was easily removed and there was no evidence of abscess or hematoma formation.

The patient was discharged the following day and was last seen in Clinic on Nov. 19, 1952, at which time he appeared normal.
SUMMARY

A review of the literature reveals various theories that have been suggested to explain the movement of bullets in the brain. Abscess and hematoma formation, location inside a ventricle and brain softening have been suggested as causes for movement. Wood stressed the importance of abscess formation occurring in association with movement of metallic foreign bodies in the brain.

This is a report of a case in which gravity was used intentionally and successfully in moving a bullet from its location 8 cm. within the skull backward along the path of entry to a point beneath the scalp from where it was easily removed, and in which there was no abscess or hematoma.

REFERENCES


CERVICAL TRAPEZE

AN APPARATUS FOR AMBULATORY TREATMENT OF FRACTURES OF THE CERVICAL SPINE

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The ambulatory treatment of the patient with a fractured neck who has no neurological injury, or whose neurological injury is not so severe but what the patient can be given such treatment, is an infrequent but desirable type of therapy. Having treated a goodly number of these patients with various types of traction devices that permit ambulation, it occurred to us that it would be well to develop a frame that could be used on patients of different builds. We have applied such traction 48 hours after the injury. The apparatus is a simple, adjustable, lightweight frame which is quite easy to employ and which will maintain adequate traction on the head so that the patient can be in any position.

The frame (Fig. 1) consists of vertical (A) and horizontal (B) tubes which are adjustable for anatomical variations in length of neck and size of head. Malleable straps (C) are attached to the base of the frame to be incorporated in a plaster jacket or full body cast. Attached onto the frame is a pulley device (D) with a flexible cable (E) and a small spring-scale (F) so that traction can be maintained at any desired weight. A turnbuckle (G) is interposed between the cable and the spring-scale to allow a finer weight-traction adjustment.

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