OSSIFYING SUBDURAL HEMATOMA

J. G. CHUSID, M.D., AND C. G. DE GÜTÉRREZ-MAHONEY, M.D.

*Neurological Division, St. Vincent's Hospital, New York, N. Y.*

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Calcification within a chronic subdural hematoma occurs rarely.\(^1,^3,^8,^10\) Although Rokitansky\(^9\) wrote over a century ago . . . “Die Wände des Sackes, zumal die an der harten Hirnhaut haftende Wand, werden zuweilen der Sitz von Verknöcherung, d.i. von Knochen-Concretion in der Form von Platten,” only a few similar examples have been noted. In a review of the literature we have encountered 3 reports of histologically verified ossification within a chronic subdural hematoma\(^2,^6,^15\) to which we wish to add a fourth case.

CASE REPORT

A 23-year-old white man was involved in a motor car accident on Mar. 29, 1942. He was dazed for a moment and about an hour later experienced left frontotemporal headache. He went to his work in a steel mill the next morning but was unable to continue after 30 minutes because he could not stand the noise. Roentgenograms of the skull were said to have disclosed a “fracture.” He remained in bed for 2 weeks and 6 weeks later was able to return to his work, at which time his headache had disappeared. He was inducted into military service on Aug. 15, 1942, and went through training without difficulty except for bothersome headaches on the mornings following long study for examinations. While on duty as an armorer-gunner on a bomber in North Africa in August 1943, he struck his head against a radio desk during a difficult landing, was dazed for a few minutes, and was not aware of any other immediate complaints. In October or November 1943, he noted feelings of “tightening up” and a sense of pressure in the head which was attributed to “operational fatigue” and which was sometimes associated with a sensation of ringing in the head and some blurring of vision. When he had completed 64 missions he was returned to the United States where he mentioned that he had headaches; X-rays of the skull were taken and he was referred for physical evaluation in October 1944. Neurological findings were not remarkable, although both plantar responses tended to be extensor at times.

*X-ray Examination, Oct. 10, 1944.* Roentgenograms of the skull showed a somewhat mottled plate of calcification beneath the inner table on the right, extending from the anterior portion of the frontal bone posteriorly beneath the parietal bone for a distance of 13 or 14 cm. The pineal body was very faintly calcified and could be visualized only on the lateral view. The pituitary fossa was normal in size and shape and there was no erosion of the clinoids or of the petrous pyramids.

*Psychometric Examinations, Oct. 18, 1944.* Results of the tests pointed to an individual of average intelligence. Notable inconsistencies in performance indicated a very marked impairment of recent memory ability and some degree of weakness in the sphere of social judgment and comprehension. Performance of memory tests corroborated these findings in indicating average remote memory ability, but striking and consistent impairment of recent memory functioning. The cooperation of the patient was adequate and results were considered representative, but positive findings suggested that the results did not reflect the optimum level for the patient at the time.

| Wechsler-Bellevue Verbal Scale, Form B | Mental age: Average adult. IQ 105 |
| Wells Memory Test | Remote Memory MQ: 97 |
| Cornell Selectee Index | Recent Memory MQ: 67 |
| Aphasia Test Battery | Score 30/15 |
| | Negative |
Pneumoencephalogram, Oct. 23, 1944. The entire ventricular system was filled and there was also some air in the subdural space. The lateral ventricles were displaced slightly toward the left and the upper surface of the right lateral ventricle was slightly depressed. The left lateral ventricle appeared to be slightly dilated as compared to the right. Some of the subarachnoid pathways appeared to be obliterated on the right side and there was dilatation of most of the pathways on the left.

The CSF was under normal pressure; cells, total protein, colloidal gold reaction and serology were unremarkable.

EEG, Dec. 12, 1944. The EEG was normal. The dominant wave frequency was 8–10 cycles per sec. with maximum amplitude of 30 to 50 microvolts. There was no evidence of focal or diffuse abnormalities. There was no change in pattern on overventilation.

Operation, Dec. 19, 1944. Under local anesthesia a large bone flap, centered in the right temporal region, was made. On elevating the flap a somewhat bluish discoloration of the dura mater was disclosed, extending for a distance of 5 cm. from the midline. This area was stony hard to touch, although at the limits of its extent the dura mater was soft and compressible. A dural flap was outlined just beyond the inferior limits of the lesion and when it was reflected it was found to consist of what appeared to be two layers, although the inferior layer was in all probability the outer capsule of the lesion. The dura mater was carefully dissected back and reflected up to the longitudinal sinus (Fig. 1). The calcified mass extended up to the longitudinal sinus and at its attachment it was perforated by the large veins from the Rolandic area where they entered the sinus. The calcified mass was not exposed in its complete extent, a small portion still remaining under the bone at the anterior and posterior limits of the flap.

Fig. 1. Appearance of operative field showing ossifying subdural hematoma with dura mater reflected upward along the longitudinal sinus.