Bilateral asymmetrical extradural hematomas

Case report

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A case is described in which bilateral asymmetrical extradural hematomas became symptomatic at different times.

Key Words - extradural hematoma - angiography - head injury - bilateral lesions

Extradural hemorrhage is a serious complication of head injury, and the fact that the condition may be bilateral is not widely known. A case is reported in which bilateral extradural clots in asymmetrical positions presented at different times. This occurrence has not been recorded before to the author's knowledge.

Case Report

A 23-year-old man was admitted to the casualty department of the Cardiff Royal Infirmary at 12:05 a.m. on March 14, 1970. An hour earlier while working on a building site he had been hit on the left side of the forehead by a crane excavator bucket. It was not known if he had been knocked unconscious, but when first seen in the hospital he was fully alert and oriented. There was a small laceration on the left side of the forehead and bleeding from the right external auditory meatus. The pupils were equal and reacted promptly to light; there were no abnormal neurological signs detectable. The blood pressure was 130/80 mm Hg, and the pulse 72/min. Skull films were normal. Two hours after injury the patient's level of consciousness deteriorated rapidly and he developed a widely dilated right pupil. The systolic blood pressure had risen to over 300 mm Hg, and the pulse rate had fallen to 50/min. Within a few minutes he was unresponsive to painful stimuli, was breathing irregularly, and both pupils had become widely dilated.

First Operation. Without skin preparation a right temporal burr hole was made and copious quantities of extradural clot sucked out. After endotracheal intubation, a temporal craniectomy was performed. A fracture line passed sagittally through the petrous temporal bone, and the middle meningeal artery at the foramen spinosum was bleeding profusely. The bleeding was controlled by diathermy and bone wax.

First Postoperative Course. Immediately after operation the pupils were small and equal but not reacting, and the blood pres-
sure was 140/80 mm Hg. The next morning the pupils were reacting sluggishly to light and the patient started to flex his limbs when stimulated. On March 17, about 48 hrs postoperatively, his level of consciousness started to deteriorate. The pupils, although still equal, became fixed to light, and he showed decerebrate movements. The blood pressure rose to 170/100 mm Hg and the pulse fell to 60/min. It was thought that the clot had reaccumulated, and a right carotid angiogram was performed accordingly. This showed shift of the midline vessels to the right (Fig. 1 left), and a left carotid angiogram confirmed the shift and seemed to indicate a left frontal lesion (Fig. 1 right).

Second Operation. Extradural clot was encountered through a left frontal burr hole, and a left frontal craniotomy exposed a hematoma estimated at 7 cm wide and 3 cm deep over the frontal pole. The clot extended over the floor of the anterior fossa, which showed a crack fracture but no definite bleeding point. After operation the patient's condition gave rise to concern and artificial ventilation was needed for 10 days.

Second Postoperative Course. For two years after injury the patient led a vegetative existence and eventually died from a chest infection.

Discussion

In two large series of extradural hematomas, only passing mention was made of bilateral lesions. Only four individual case reports of bilateral clots have been found in the literature. In these cases confusing
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neurological signs necessitated bilateral exploration, and bitemporal hematomas were removed within a short time of each other. The present case seems unique in that the extradural clots were found in asymmetrical positions and had developed at different speeds. It confirms both Hooper's observation\(^2\) that the progress of the clinical picture of anterior fossa hematomas is much slower than that in middle fossa lesions, and Whittaker's comments\(^8\) on the value of angiography in such cases.

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References


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