EXTRADURAL HEMATOMA OF THE ANTERIOR FOSSA

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The classic traumatic extradural hematoma of the middle fossa caused by middle meningeal bleeding is known universally today. Extradural hematoma of the anterior fossa is rare and the past history of this lesion is one of surprise and frustration for the clinician involved. Two cases of hematoma of the anterior fossa and a review of the literature are presented herein and a solution to this vexing problem is offered.

CASE REPORTS

Case 1. KUMC 54-8823. R.S., a 4-year-old white male, fell about 8 feet, striking his head, but he was not rendered unconscious. He was sleepy but easy to rouse and vomited twice until 6½ hours later when generalized seizures began. Soon thereafter the right pupil was noted to be dilated and unreactive.

Immediately upon admission to the University of Kansas Medical Center, 10 hours after the fall, status epilepticus was present; both pupils were unresponsive to light, the right being larger than the left, and there was decerebrate posturing. The situation was deemed critical and he was rushed to surgery.

Bilateral subtemporal extradural and subdural exploration, via large subtemporal craniectomies, was negative.

Death ensued 15½ hours after the injury.

Autopsy revealed a linear fracture of the skull parallel to the right coronal suture and an underlying extradural hematoma (7×5×3 cm.) limited to the anterior fossa, which compressed the right frontal lobe markedly (Fig. 1). Microscopic study of the brain stem revealed no abnormalities. The surgical trephination had missed the posterior limits of the hematoma by a few mm.

Case 2. KUMC 58-14986. K.D., a 16-year-old white male, collided head-on with his coach while playing basketball and both were rendered unconscious for a few minutes. He recovered quickly, went home, vomited several times and complained of generalized headache. Eighteen hours after the injury he became lethargic, and 10 hours later he was stuporous.

Examination upon admission and immediately before surgery, 35 hours after injury, revealed a stuporous boy who moved all extremities to noxious stimuli, a left orbital hematoma, a dilated unreactive left pupil, diffuse hyperreflexia, bilateral ankle clonus and a right Babinski's sign.

A right-sided clonic seizure occurred immediately before and immediately after a negative bilateral subtemporal extradural and subdural exploration.

Carotid arteriography, performed 42 hours after injury, revealed a shift of the anterior cerebral vessels to the right and posteriorly (Fig. 2).

An immediate left frontal craniotomy was performed and a large epidural hematoma at the anterior pole was evacuated.

An uneventful recovery followed.

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Fig. 1. Case 1. Autopsy findings showing extradural clot and deformation of the underlying right frontal lobe.

DISCUSSION

Extradural hematomas of the anterior fossa are rare (Table 1). Jacobson, in his Case 70 and probably also Case 32, described the findings at autopsy. Jefferson reported the postmortem finding of a clot in the frontal pole after bilateral negative subtemporal explorations. Briesen mentioned a similar case. Gross and Savitsky reported 3 cases; the patient in their Case 2 undoubtedly was saved by prompt extension of a subtemporal craniectomy to the anterior fossa; however, their Case 3 was unusual in that operation was performed on the 8th day after injury and the slowly

Fig. 2. Case 2. Carotid arteriogram showing displacement of anterior cerebral vessels to the right and, in the lateral view, posteriorly.