CASE REPORTS

EXTRADURAL HAEMORRHAGE IN A CHILD, WITHOUT SKULL FRACTURE, FOLLOWING MINOR TRAUMA

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From Percivall Pott's original recognition and Jacobson's classical description of extradural haemorrhage, its association with a definite injury has always been reported, with one exception, in an adult, recorded by Chambers. It was observed by Sir Charles Bell that the dura mater may be "shaken" from the skull by blows from a wooden mallet; Jacobson also noted the "apparent slightness of violence—some slight tap" as a precedent to extradural bleeding.

In children, Wakeley and Lyle pointed out that the membranous bones of the vault are elastic and may bend rather than crack, which factor, together with incompletely closed sutures, may help dissipate a force over the area where the dura mater is least tightly attached, away from the suture. Ingraham et al. studied the matter further and suggested, from their studies, that there is a marked difference in elasticity between the skull and dura mater, especially around the twelfth year of life when the skull becomes "adult" in physical character, considerably earlier than the dura mater. Children do not often lose consciousness at the time of injury: only 3 of the 20 patients reported by Ingraham et al. were unconscious and these authors, together with Wakeley and Lyle, pointed out that physical signs of an extradural haemorrhage are more important in making a correct diagnosis than a "lucid" interval of any duration—it may be quite prolonged in childhood—or other part of the history.

It is, therefore, perhaps unexpected that there is not wider record of the possibility of extradural haemorrhage occurring in childhood without history or sign of injury and hence nothing to help in making the diagnosis other than the physical signs.

CASE REPORT

Ronald E., aged 11 years, was admitted on Oct. 15, 1957 in coma with a history that for several years he had had attacks of "migraine," left-sided headaches, of sudden onset, lasting about 2 hours, followed by 2 hours of deep sleep, then apparent perfect normality. On the day of admission at about 6 P.M. he complained of his "usual" headache and lay down to sleep; at 8:30 P.M., by which time he should have been awake, he was still deeply asleep. His parents made no attempt to wake him until 10 P.M., when they were certain that he should have been awake, but no attempts were successful. He was seen shortly by his private doctor who recognised the possibilities of a comatose child with a fixed, dilated pupil on one side.

The boy was admitted to hospital at 10:55 P.M. when examination showed no sign of any injury and the parents did not know of any within preceding weeks. He was in coma, without stertor, but with a right spastic hemiplegia and a left, widely dilated, fixed pupil. The right pupil and both fundi were normal. Roentgenograms of the skull showed no abnormality.
Forty minutes after admission a trephine disc was raised at the left pterion without anaesthesia; as the trephine was lifted from its grooves, the disc was raised spontaneously by pressure of clot within. Two ounces of clot were removed followed by much bright red fluid blood which was found to be coming from the posterior branch of the middle meningeal artery; the bleeding point was occluded with diathermy. The dura mater did not expand rapidly and preparations were made to introduce saline into the lumbar theca. During this manoeuvre the depth of coma lessened and amid some struggling the dura mater expanded spontaneously.

Postoperatively consciousness was regained completely within 48 hours and all abnormal neurological signs disappeared in 7 days, the right plantar response being the last to return to normal.

The child's subsequent recovery was uneventful until he was killed in a traffic accident on Jan. 14, 1958. Postmortem examination disclosed no abnormalities within the cranium, the defect from the operation being the only defect. Death was caused by atlanto-axial dislocation.

On further questioning the boy after recovery, he said that about a week before admission he had been fighting with his friends who had thrown him into a heap of grass cuttings onto the left side of his head; he had no headache or other symptoms of injury after this episode and but for being reminded would have forgotten it.

COMMENTS

This case is presented to illustrate the importance of observing the physical signs rather than the history and to support the conception that no great trauma is required to precipitate extradural bleeding.

I wish to thank Mr. A. Dickson Wright under whose care this patient was admitted, for permission to carry out treatment and for his great help and encouragement throughout, and also for permission to report the case.

REFERENCES