SHORT REPORT

Rapid spontaneous resolution of an acute extradural haematoma: case report

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Abstract
A case of acute extradural haematoma with spontaneous resolution within 6 h of the head injury is presented. The literature is reviewed.

Key words: Acute extradural haematoma, early spontaneous resolution, epidural haematoma, head injury, skull fracture.

Introduction
The standard management of extradural haematomas (EDHs) is based upon early diagnosis and prompt evacuation. However, in the last two decades this has been questioned by several authors who have reported spontaneous resolution and good clinical results with non operative management in a selected subgroup of EDHs. Nonetheless, early spontaneous resolution of an extradural hematoma is very rare and to the best of our knowledge, it has been reported only twice. We report here a case of a patient with an EDH, in whom spontaneous resolution of the haematoma occurred within the first 6 h after injury.

Case report
A 43-year-old man suffered a head injury when he fell from a height of about 5 feet, (1.5 m). He was taken to a local hospital where, upon admission, he was neurologically intact except for post-traumatic amnesia. He had a right otorrhagia and complained of intense headache. CT performed about an hour after injury showed an EDH in the right temporal region (Fig. 1). The haematoma measured 4×2.2×1.5 cm, and its mass effect was almost negligible. There was also a skull fracture of the temporal squama, and the anterior and superior wall of the external auditory canal. The patient was transferred to our service.

On admission, the patient had remained in a good neurological condition, but complained of severe headache. To rule out that the haematoma had increased in size in the time elapsed from the first scan, CT was performed about 6 h after the injury. Unexpectedly, this showed resolution of the haematoma (Fig. 2). The otorrhagia stopped on the third day. CT repeated on the fourth day ruled out reaccumulation of the haematoma. The patient was discharged on the fifth day.

Discussion
The first two cases of spontaneous resolution of an EDH were reported by Weaver et al. in 1981. Since then, non-operative management has been proposed by several authors in selected patients with small haematomas, provided that the patient can be monitored closely and repeated CT can be performed. This attitude has been challenged by

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Received for publication 5 June 1998. Accepted 7 July 1998
ISSN 0268–8697 print/ISSN 1360–046X online/99/060604–02 ©The Neurosurgical Foundation
those who think that given the extremely low morbidity of operation for HED in this type of patients, such non-operative management should be avoided. Furthermore, it has also been shown that CT performed immediately after head injury may miss a developing EDH, thus creating a false sense of security.\(^3, 4, 6, 8, 13, 14\) Knuckey et al.\(^4\) showed that when a small EDH was diagnosed within 6 h of trauma, 43% of the patients who initially were managed conservatively required subsequent evacuation.

The time course of spontaneous resolution in EDH is measured in weeks and rarely in days.\(^2, 3, 6-8, 10, 11, 12\) Resolution of an EDH within hours after trauma is extremely rare.\(^1, 5\) Although subacute or chronic resolution of EDHs may represent the normal process of haematoma resorption, hyperacute resolution, as in the case we are presenting, may represent spontaneous evacuation of the haematoma through an overlaying fracture line, as suggested by Aoki\(^1\) and Kuroiwa et al.\(^5\) While these authors postulated a pressure gradient due to intracranial hypertension, we think that in our case the EDH communicated with the external auditory canal, making possible its ultra-early drainage without any need for postulating intracranial hypertension.

Although we agree that in most cases nonoperative management of EDH is not appropriate there is a subgroup of EDH in which an expectant attitude can be undertaken. The possibility of a rapid spontaneous resolution of an extradural haematoma associated with an overlying skull fracture is rare, but it must be taken into account in patients who are in a good neurological condition.

References