

Article

Post-traumatic massive acute subdural haematoma in a child following trivial fall

Amit Agrawal
INDIA



DE GRUYTER
OPEN

Post-traumatic massive acute subdural haematoma in a child following trivial fall

Amit Agrawal

Department of Neurosurgery, Narayana Medical College Hospital, Chinthareddypalem, Nellore, Andhra Pradesh, INDIA

Abstract: Post-traumatic acute subdural haematomas are rare in children and associated with significant cerebral oedema. There is need to understand pathophysiology in a better way to improve the outcome. We report a case of traumatic acute subdural haematoma in five year old male child because of its rarity and difficulty confronted in the management of this lesion.

Key words: Acute subdural haematoma, pediatric head injury, trauma

Introduction

Acute traumatic intracranial hematomas (ASDH) in children are rare lesions and account for 2.9% of a total of intracranial hematomas and 0.6% of a total of children with cranio-cerebral trauma. (1) Out of these acute post-traumatic subdural haematomas in children are still rarer (1-6) and involve infants, new born and toddlers in order of frequency. (6) We report a case of traumatic acute subdural haematoma in five year old male child because of its rarity and difficulty confronted in the management of this lesion.

Case report

Four year old male child presented with the history of fall from bullock-cart after 6 hours of injury. He was in altered sensorium since then and had multiple episodes of vomiting.

There was no history of ear, nasal or throat bleed or convulsions. His general and systemic examination was unremarkable. Neurologically he was in altered sensorium and his GCS was E1V1M4. Pupils were small in size but reacting to light. He was moving all four limbs left side more than right side. His computerized examination (CT scan) examination showed a large acute subdural haematoma over left temporo-parieto-occipital region with significant cerebral oedema, mass effect and midline shift (1.5 cm) (Figure 1). His blood investigations were normal. He underwent large left temporo-parietal craniotomy and evacuation of thick acute subdural blood clot. After evacuation of haematoma brain was very tense and bulging. Dura was closed with the help of pericranial graft. Child was kept on endotracheal tube and electively ventilated. He was also started on

high dose of anti-oedema measures and prophylactic anticonvulsant. After 6 hours of surgery child started to develop hyperthermia and fluctuation in pulse rate and blood pressure. He was started on ionotropic support. In spite of these measures he could not be revived and expired.

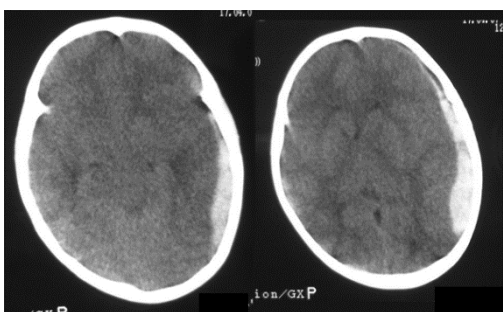


Figure 1: Large acute subdural haematoma over left temporo-parieto-occipital region with significant cerebral oedema, mass effect and midline shift

Discussion

Causes of acute subdural haematomas in children are mainly non-traumatic (parental or familial abuse) and trauma is an uncommon cause of ASDH. (3,6) Indications for surgical evacuation are based upon clinical and radiological features (4) and correct diagnosis and early surgical intervention combined with therapeutic measures improves cerebral hemodynamics (4) and ensures a favorable outcome in majority of the cases. (1, 4, 5) However in children with ASDH there is a high incidence of increased intracranial pressure. (4) These findings of cerebral oedema in children with ASDH signifies severe injury and associated poor neurological status further make the outcome worse as in

present case. (2) Post-traumatic ASDHs in children need further evaluation to better understand the pathophysiology for better management and to improve outcome.

Correspondence

Dr. Amit Agrawal
Professor of Neurosurgery
Department of Neurosurgery
Narayana Medical College Hospital
Chinthareddypalem
Nellore-524003
Andhra Pradesh (India)
Email- dramitagrawal@gmail.com
dramit_in@yahoo.com
Mobile- +91-8096410032

References

1. Okladnikov GI, Nesterenko LKh, Svarovskaia VI, Aksenov SA, Kurov OM, Potapov IuA. [Acute traumatic intracranial hematoma in children][Article in Russian] Zh Nevropatol Psikhiatr Im S S Korsakova. 1989;89(8):53-5.
2. Chung CY, Chen CL, Cheng PT, See LC, Tang SF, Wong AM. Critical score of Glasgow Coma Scale for pediatric traumatic brain injury. *Pediatr Neurol.* 2006 ;34(5):379-87.
3. Dashti SR, Decker DD, Razzaq A, Cohen AR. Current patterns of inflicted head injury in children. *Pediatr Neurosurg.* 1999 ;31(6):302-6.
4. Meyer PG, Ducrocq S, Rackelbom T, Orliaguet G, Renier D, Carli P. Surgical evacuation of acute subdural hematoma improves cerebral hemodynamics in children: a transcranial Doppler evaluation. *Childs Nerv Syst.* 2005 ;21(2):133-7.
5. Spanu G, Pezzotta S, Silvani V, Leone V. Outcome following acute supratentorial subdural hematoma in pediatric age. *J Neurosurg Sci.* 1985 ;29(1):31-5.
6. Gutierrez FA, Raimondi AJ. Acute subdural hematoma in infancy and childhood. *Childs Brain.* 1975;1(5):269-90.