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Unexpected Site of Haematoma on Post-Traumatic Neuroimaging of a Child

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ANSWER TO JCHS-IQ-02-2019

Question 1: C

Question 2: D

Discussion

Post-traumatic haematomas in the posterior fossa are uncommon [1]. Extraparenchymal haematoma can occur in the subdural, subarachnoid and extradural/epidural spaces. Retroclival location of haematoma is also not frequently encountered [1-5]. Traumatic Retroclival Epidural Haematoma (RCEH) is a rare entity with greater prevalence in pediatric population compared to adults and should be suspected in children involved in road traffic accidents [2-4]. It is postulated that horizontal articulation between the cranium and the atlas as well as ligamentous laxity at the craniocervical junction in paediatric age group predisposes them to ligamentous injury and formation of retroclival hematoma [1-5]. As the diagnosis is frequently missed, three-dimensional reconstructed CT or MRI is considered imperative in the diagnosis of this condition [2].

Differentiation between RCEH and subdural haematoma is important in deciding surgical versus conservative management [1]. Due to the anatomy of the dural layers, RCEH descends down to the attachment of tectorial membrane at the body of C2 vertebra while subdural haematoma extends beyond the level of C2 [1].

Management of RCEH is largely conservative, depending on the presence or absence of mass effect onto the brainstem [2,4,5]. Follow up imaging usually show resolution of the haematoma [3,5].

Learning Points

- Extraparenchymal intracranial haematoma can occur in different spaces namely the subdural, subarachnoid and extradural/epidural spaces.
- Retroclival epidural haematoma descends down to the attachment of tectorial membrane at the body of C2 vertebra while subdural haematoma extends beyond the level of C2.

Conflict of Interest

Authors declare none.

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