

Supra- and infratentorial acute extradural haematoma

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Abstract: Simultaneous presence of posterior fossa as well as supratentorial acute extradural haematoma have extremely rare occurrence. One such case is been documented. It occurred due to road traffic accident and operated successfully. A brief review of literature is being presented.

Keywords: extradural haematoma, head injury, lateral sinus, tentorial

INTRODUCTION

Traumatic subacute and acute extradural haematoma (EDH) of the posterior fossa are infrequent lesions. CT Scan and MRI can be used for early diagnosis of such cases and angiographic demonstration is also possible¹. Overwhelming features of one dominate features of others.

CASE REPORT

A 35 years male was referred to our hospital with road traffic accident in an unconscious condition on plain X-rays & CT showed presence of infra as well as supra tentorial acute extradural haematoma (Figs 1-2). Immediate craniotomy was performed to evacuate the infra tentorial posterior fossa haematoma. During operation it was detected that the haematoma was from

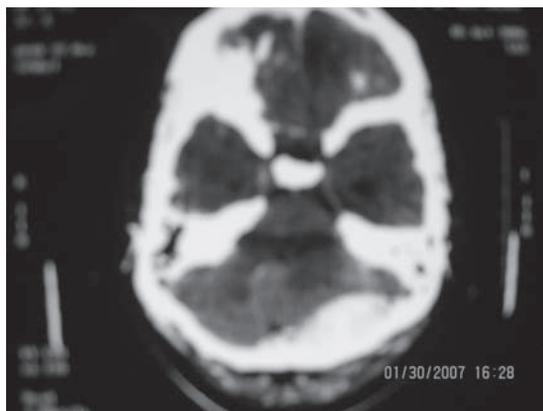


Fig 1: CT showing infratentorial EDH

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Fig 2: CT showing supratentorial EDH

the lateral sinus tear and the whole of the sinus was lifted from the bony cranium, which rather eased the approach to the supratentorial compartment, and the supratentorial EDH was also removed in same sitting. Post operatively patient showed clinical and radiological improvement (Figs 3-4) and was discharged on the fifth postoperative day without any untoward sequelae.

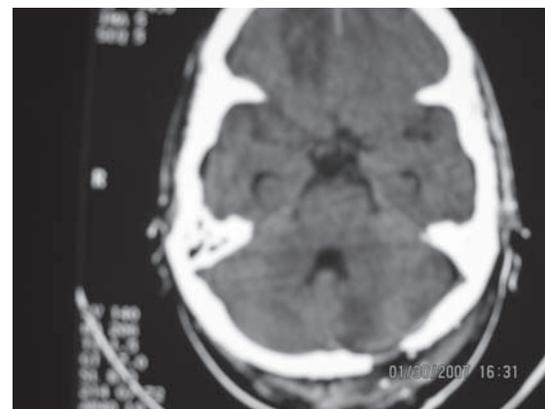


Fig 3: Post operative CT showing EDH evacuation

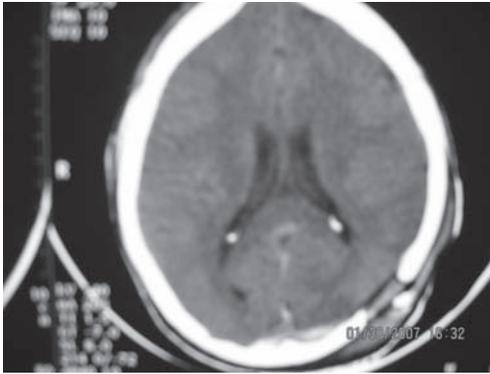


Fig 4: Post operative CT showing evacuation of EDH

DISCUSSION

Simultaneous acute supra- and infratentorial extradural haematomas straddling the lateral sinus are rare lesions. One of the best clinical element to suggest such a lesion is the presence of fracture line that crosses the lateral sinus²; a finding which should necessitate complete investigations¹. The classical sign of detachment of the torcula is seen only in about 25% of cases^{1,2}. Twenty-four per cent of patients did not show fractures on skull X-rays. Atypical location of the haematoma was noted in 22 cases, mainly in the anterior fosse (19 cases). While the overall mortality rate has been 17%, the operative mortality rate is also high at 14%. The morbidity rate has been 6%, with 3% of patients presenting severe disability. Morbidity and mortality has been shown to be affected by age with better prognosis in patients under 10 years of age. As regards location, frontal haematomas have shown a better prognosis and a favorable course than convexity haematomas. Finally, prognosis of extradural haematomas in children have improved to some extent in the last years with the advent of the CT scans, possibly due to speed and accuracy of diagnosis³. Cerebellar signs and involvement of one of the cranial nerves is observed in only one out of five cases. The elderly are less likely to manifest signs or symptoms of increased intracranial pressure due to cerebral atrophy, and almost all haematomas in them occurred in the parietal area. Elderly patients with EDH after a fall, have a better prognosis than is often feared⁴. The subacute form of posterior fosse extradural haematoma, which presents a few days after minor occipital trauma, is a distinct clinicopathological entity that occurs most commonly in the 5- to 10-year-old children⁵. Posterior fosse epidural hematomas are much less common than supratentorial epidural hematomas.

The incidence of posterior fosse epidural hematomas among intracranial epidural hematomas has been reported to be 4% to 7%.

Acute posterior fosse epidural hematomas can be initially symptom-free. Deterioration can however be quick and life-threatening. Therefore, CT should always be performed when an occipital trauma is diagnosed⁶.

Posterior fosse extradural hematoma (PFEDH) is an uncommon trauma sequel and in pediatric age group is still rare. Only a few studies discuss PPFEDH and in most of them outcome has been good. Trauma has been subtle and fracture of occipital bone is seen in majority of cases. Treatment has been operative in majority of the cases. Most of the patients were diagnosed only on high index of suspicion with a history of trauma on the occiput, fracture of the occipital bone and persistent symptoms suggestive of increasing intracranial pressure and posterior fossa space occupying lesion. CT scanning was done liberally to confirm the suspicion and the patients with hematoma were treated aggressively by surgical evacuation with good recovery in most of them. However some patients can be managed conservatively but they should be closely observed for clinical manifestation and CT scan done routinely to evaluate the progress of hematoma radiologically. A strict criterion should be followed in choosing such patients for conservative treatment⁷. Recent advances in the equipment and technology for endovascular surgery have led to an increasing number of patients undergoing endovascular procedure to treat various lesions. In patients with thin Acute EDH in the early stage, angiography followed by endovascular intervention allows for conservative treatment. Notable clinical benefits can be achieved in patients with complicated, multiple lesions⁸. Bilateral extradural haematoma is a rare condition and the prognosis is mainly dependent of the pre-operative neurological status^{9,10}. Simultaneous supra- and infratentorial EDH is extremely rare.

CONCLUSION

The presence of supratentorial EDH can mask the features of infra tentorial EDH which is more prone to cause complication rapid deterioration and sudden death. There fore the presence of infratentorial acute EDH should be strongly suspected in the presence of fracture line at the lateral or sigmoid sinus which is an indication for urgent CT evaluation of the posterior fossa.

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