

## VIEWER'S CHOICE

### Sudden Increase in the Size of Scalp Swelling: A Sign of Underlying Extradural Hematoma

Amit Agrawal, Akshay Pratap, Anand Kumar, Siddhartha Kumar

#### Abstract

It has been reported that there may be sudden increase in the size of epicranial hematoma over a linear skull fracture secondary to the decompression of the acute extradural hematoma into the epicranial region through the fracture line. In present case underlying extradural hematoma could be recognized when child developed sudden increase in the scalp swelling and investigated with the CT scan.

**Key words:** Scalp hematoma, extradural hematoma

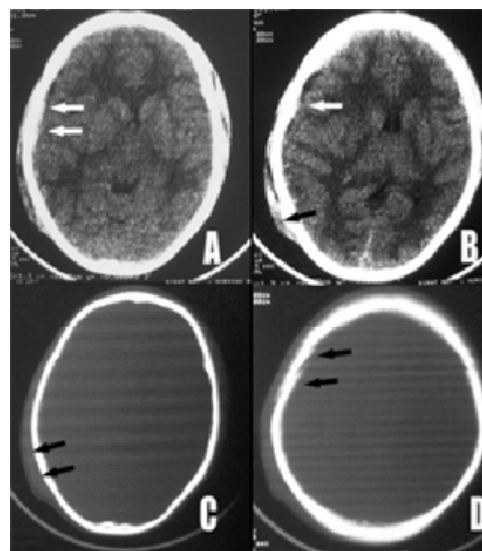
**Introduction:** Acute traumatic epidural hematomas (EDH) constitute one of the most critical emergencies in neurosurgical management.<sup>1</sup> Spontaneous resolution of EDH is a rare phenomenon. In present case, underlying extradural hematoma could be recognized when child developed sudden increase in the scalp swelling and investigated with the CT scan.

**Case report:** This 12 years child presented with history of fall from ladder (about 6 feet height). Following that he had transient loss of conscious and two episodes of vomiting. He presented to our casualty after 8 hours of injury. His general and systemic examination was normal and there were no neurological deficits. The patient was managed conservatively with provision to proceed with immediate investigations in the event of any change in the neurological status or signs of raised intracranial pressure. His X-ray skull showed linear fracture of right parietal bone. He was apparently alright for next 36 hours except mild local pain. The child noticed increase in the severity of headache and also he had two more episodes of vomiting. At the same time parents noticed gradual increase in scalp swelling with reduction in the intensity of headache. In view of increase in headache and episodes of vomiting he was investigated with CT scan and it showed thin right parietal extradural hematoma (Figure-1A), right fronto-parietal subgaleal hematoma (Figure-1B and C) and linear fracture of right parietal bone (Figure-1D) with mild cerebral oedema, right more than left with midline shift to left (Figure-1A and B). This child probably had EDH that was increasing in size and because of cerebral oedema it got decompressed outside through linear fracture of parietal bone with relief in symptoms.

**Address for Correspondence :** Amit Agrawal, Assistant Professor in Neurosurgery, Department of Surgery, B.P. Koirala Institute of Health Sciences, Dharan, Nepal. Email: dramitagrawal@gmail.com

**E-published: March 2007**

**Figure-1.** CT scan showing thin rim of extradural hematoma (A, arrows), hyperdense subgaleal collection (B and C, arrows) and linear fracture of right parietal bone (arrows). Also note the cerebral oedema right more than left with midline shift to left



**Discussion:** It has been reported that there may be sudden increase in the size of epicranial hematoma over a linear skull fracture secondary to the decompression of the acute extradural hematoma into the epicranial region through the fracture line.<sup>2</sup> This can be characterized by an increase in the CT density of the pericranial soft tissue near the hematoma as in the present case.<sup>3</sup> As in the present case the mechanism of the hematoma resolution may probably be related to the concomitant acute brain swelling.<sup>4</sup> The pressure gradient between the subgaleal (less than intracranial pressure) and epidural space may have been important in the rapid disappearance of this epidural hematoma.<sup>1,3</sup> It may not be possible to do CT scan for all the patients but there should be a low threshold to investigate patients particularly

#### References

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