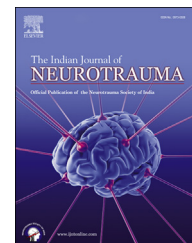


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## Case Report

# Orbital subperiosteal hematoma associated with frontal & subfrontal extradural hematoma – A case report

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### ABSTRACT

An orbital subperiosteal hematoma following a head injury is relatively uncommon. An interesting case of a patient who sustained head injury with a cricket ball where the injury resulted in a frontal extradural hematoma with an associated orbital subperiosteal hematoma is reported here. The literature related to this unusual case is reviewed here.

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## 1. Introduction

Orbital subperiosteal hematoma is a rare pathology reported in literature.<sup>1,2</sup> Most cases are traumatic in origin, though it may be spontaneous and have been reported in cases with sickle cell disease, sinusitis and renal diseases.<sup>3,4</sup> In traumatic cases it may be associated with an orbital roof fracture.

An orbital subperiosteal hematoma associated with a subfrontal extradural hematoma is an even rarer entity and very few cases have been reported in literature.<sup>5</sup> We present one such case.

## 2. Case report

A 13 year old boy was brought to our Outpatient Department with a history of being injured with a cricket ball over his forehead on the right side 10 days back (Fig. 1). He did not lose consciousness but had complains of headache in his right



Fig. 1 – Preoperative.

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Fig. 2 – NCCT brain.

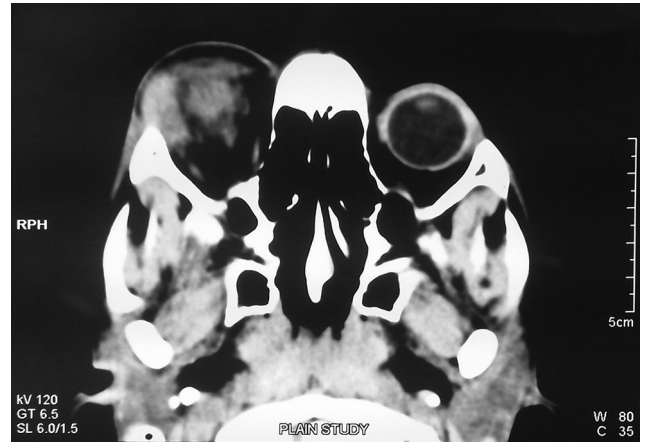


Fig. 4 – NCCT brain.

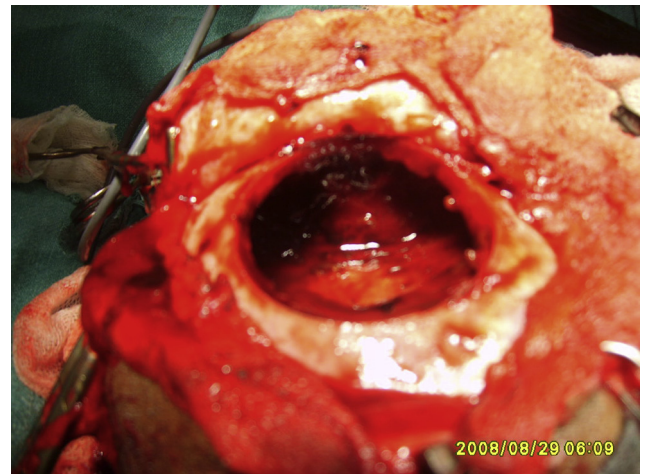


Fig. 5 – Peroperative.

frontal region. He had two episodes of vomiting on the day of injury. There was no history of ear or nose bleed. From the second day onwards he developed gradually progressive proptosis of his right eye with a gradual diminution of vision. On initial evaluation the general status of the patient was moderate. His vital parameters were stable. He was anxious, but oriented and co-operative. GCS E4 V5 M6 (15/15). On physical examination periorbital ecchymoses and profuse conjunctival chemosis with proptosis was seen in the right eye. His vision was limited to finger count at 1 m distance in his right eye and was 6/6 in left. He also had a limitation of eyeball movement in all directions. Pupils were equal

bilaterally but had relative afferent pupillary defect in the right eye. Fundoscopy showed a hyperemic disc with disc edema and hemorrhage. Apart from this neurological examination overall did not reveal any abnormality.

CT brain revealed a large frontal and subfrontal extradural hematoma on right side with an orbital subperiosteal hematoma (Figs. 2–4). Orbital roof was not fractured.

He was operated upon, a frontal craniotomy was done and the EDH evacuated. A small burr hole was done through the

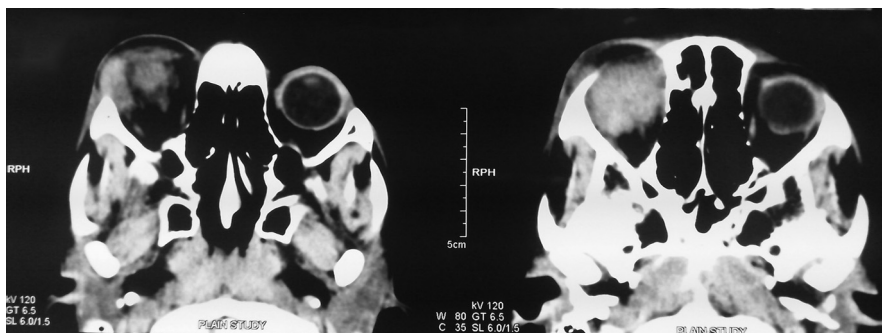


Fig. 3 – NCCT brain.



**Fig. 6 – Postoperative.**

craniotomy defect in the roof of the orbit and the orbital hematoma, which had liquefied, was drained (Fig. 5).

The proptosis reduced immediately after surgery. Visual acuity returned to normal on the second day. He had developed a peripheral corneal haziness from 7 o'clock to 9 o'clock position (Fig. 6). Postoperative recovery was uneventful. Follow up at two and six months revealed that the child had regained normal function.

### 3. Discussion

Orbital subperiosteal hematomas are rare, reported earlier in literature as “blood cyst”.<sup>6</sup> Most cases are associated with trauma where mechanical disruption of small vessels under

the periosteum leads to the condition. However it has also been reported in cases of sickle cell disease, sinusitis and renal diseases. Proptosis, ophthalmoplegia, chemosis, lid hematoma, subgaleal hematoma and visual dysfunction are most common clinical manifestations. Treatment options include observation, needle aspiration and surgical evacuation.<sup>6</sup>

Association of an extradural hematoma with an orbital subperiosteal hematoma is very rare and only few cases have been reported in literature.

Such cases need prompt evacuation of both. A timely intervention leads to an excellent recovery.

### Conflicts of interest

All authors have none to declare.

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