

## Evacuation of an Epidural Hematoma Without Neurosurgical Intervention

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### CASE REPORT

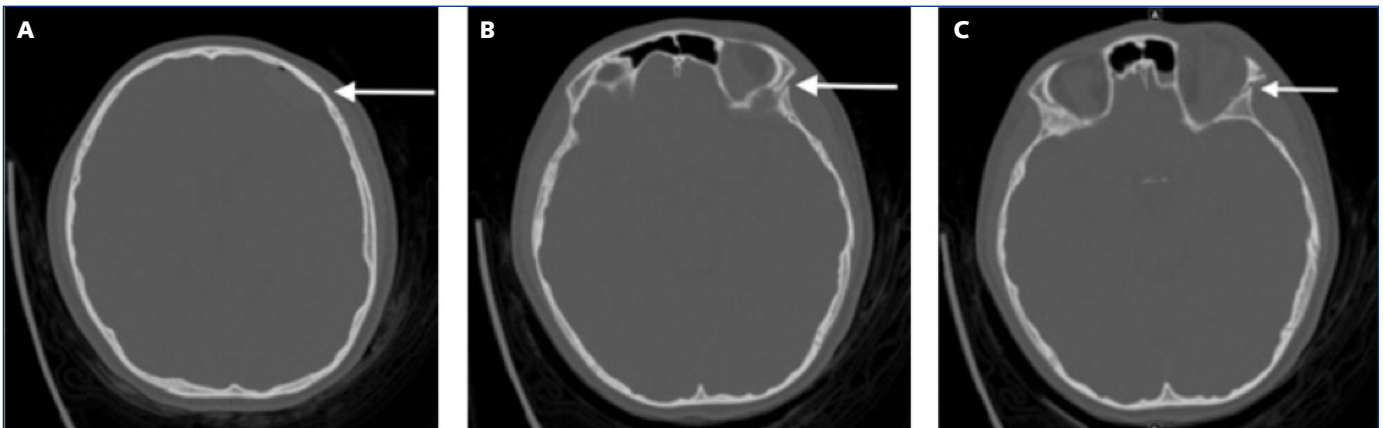
An 11-year-old female presented to the pediatric emergency department (PED) after a truck collided into her. She had lost consciousness initially but had a Glasgow Coma Score of 15 when emergency medical services arrived. At the PED, physical exam was notable for a left superolateral aspect forehead abrasion, left upper eyelid edema, and left subconjunctival hemorrhage. She complained of left eye visual loss, pain, and diplopia.

Facial CT demonstrated a non-displaced frontal bone fracture extending into the left lateral orbital wall with associated retrobulbar hematoma and proptosis (**Figures 1 and 2.**).

Computed tomography (CT) of the brain revealed an extra-axial fluid collection consistent with epidural hemorrhage, compressing the left frontal lobe by 18mm at maximal thickness (**Figure 3A**).

Lateral canthotomy and cantholysis were performed to

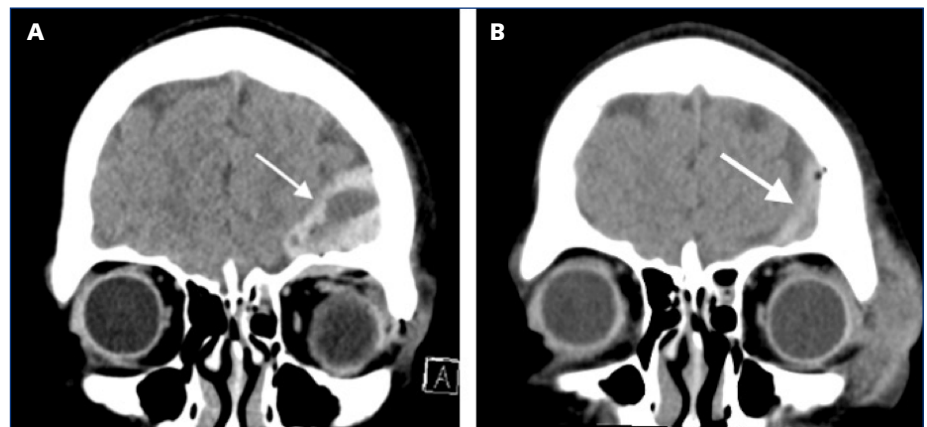
**Figure 1.** Axial CT demonstrating **[A]** nondisplaced left frontal bone fracture with underlying epidural hematoma and scant foci of pneumocephalus. **[B]** The frontal bone fracture extends inferiorly to involve the greater wing of the sphenoid and **[C]** the lateral wall of the orbit which is minimally comminuted and displaced.



**Figure 2.** Axial CT demonstrating an extraconal hematoma along the lateral wall of the left orbit with secondary proptosis.



**Figure 3.** Coronal CT demonstrates **[A]** left frontal epidural hematoma and scant foci of pneumocephalus before lateral canthotomy **[B]** Decreased size of the left frontal epidural hematoma following lateral canthotomy.



decompress the orbital compartment. Immediately afterward, the patient's visual symptoms improved.

Orbital compartment syndrome is a sight-threatening emergency requiring prompt intervention to prevent vision loss.<sup>1,2</sup> Decompression is performed by the following steps: 1) The area is sterilized; 2) The tissue is anesthetized; 3) The lateral canthus is crushed to minimize bleeding; 4) The lateral canthus is incised to reveal the lateral canthal tendon; 5) The lateral canthal tendon is cut to release the pressure.<sup>3</sup>

Epidural hematomas often require neurosurgical operative intervention.<sup>4,5</sup> Remarkably, a repeat head CT obtained hours later revealed an interval decrease in the epidural hematoma to 5mm at its maximal thickness (**Figure 3B**). We hypothesized that the lateral canthotomy and cantholysis evacuated a portion of the epidural hemorrhage. The patient was admitted to the pediatric intensive care unit and subsequently did not require any neurosurgical interventions.

## References

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