

# TRAUMATIC SIMULTANEOUS ACUTE SUBDURAL AND EXTRADURAL HEMATOMA, A CASE REPORT

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## Abstract:

*We report an unique case of brain trauma, harboring acute subdural haematoma and extradural haematoma on the both side.*

**Keywords:** *extradural hematoma, head injury, subdural hematoma.*

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## Introduction

Occurrence of simultaneous acute subdural hematoma (ASDH) and extradural hematoma (EDH) after single trauma is rare. Also, it is the ASDH that determines the severity of injury and outcome, due to its associated underlying brain injury. In the present communication, we present an unique case of simultaneous occurrence of ASDH and EDH, on both side in a comatose patient.

## Case Report

A 60-year-old male presented 30 hours after road traffic accident with severe head injury in a decorticate state. CT scan of head showed left-sided frontal acute subdural hematoma and right- sided posterior parietal extradural hematoma (Fig 1- a, b).

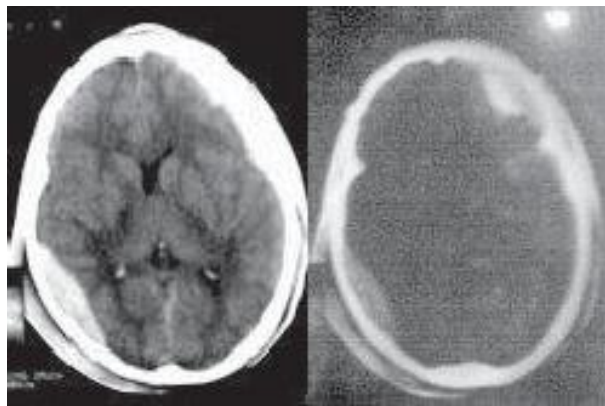


Fig: 1- a

Fig: 1- b

Immediate surgery was under-taken and left-sided frontal craniotomy was performed. A large acute subdural hematoma was evacuated, leaving a lax dura with augmentation. Right posterior parietal craniotomy was performed. A big extradural hematoma was evacuated, with stay sutures performing. As the dura was lax and pulsatile, bone-flap was replaced and wound closed. The patient recovered very well after surgery and was discharged with GCS 15. Check CT scan, after 4 weeks of surgery, showed completed evacuation of hematomas (Fig: 2- a, b).

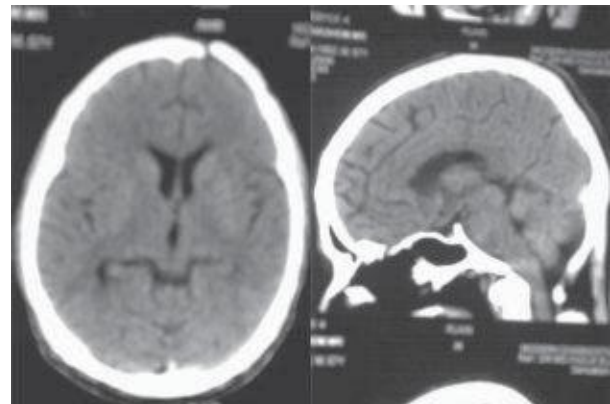


Fig: 1- a

Fig: 1- b

## Discussion

Surgical evacuation of the traumatic EDH is one of the most 'cost effective' of all surgical procedures in terms of quality of life and years preserved<sup>1</sup>. In spite of advances in modern head trauma management, patients with acute SDH have worse prognosis than any other type of head trauma, with mortality rates reaching as high as 60%<sup>2</sup>.

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The mechanism of formation of traumatic EDH and SDH are entirely different. EDH, primarily located in the temporal or temporo-parietal region is due to tear of anterior or posterior divisions of the middle meningeal arteries with an associated linear vault fracture. The skull deformation probably initiates the process of dural stripping. In cases of acute SDH, it is the bleeding from contused, lacerated brain cortex, torn bridging veins, or a torn cortical blood vessel, which leads to subdural hematoma accumulation. Approximately, half of SDH patients have associated traumatic brain lesions including contusions, hematomas or cortical lacerations. It is well established that the primary underlying brain injury dictates the final outcome in SDH patients<sup>2</sup>.

In the present case, the presenting CT scan showed an acute subdural hematoma in left frontal region and a biconvex shaped extradural hematoma in right posterior parietal aspect of brain. Intra-operatively, clot was appreciated and evacuated. After evacuation of hematomas dura was pulsatile. The postoperative CT scan showed complete evacuation of hematomas on both side. In *Rahul Gupta, Sandeep Mohindra, Saurabh Kumar Verma* retrospect, careful reading of

CT scan (Fig 1) shows well-delineated margins of parietal clot, as compared to hazy outline of frontal region clot, suggesting the presence of both ASDH and EDH. Further, the resolution of ASDH was catalyzed by CSF outflow after subarachnoid breach, indicating minimal primary brain injury<sup>3</sup>.

### Conclusion

This is an unique case of head injury where both ASDH and EDH occurred simultaneously and urgent evacuation of hematomas determined the final outcome. Further, even in poor grade trauma patient, resolution of hematomas may occur.

### References

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