

## Acute Bilateral Extradural Haematoma - A Series Of Nine Cases

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**Abstract:** Extradural hematomas (EDHs) are contact injuries resulting from blunt trauma to the skull. Bilateral acute EDHs are extremely rare and is a major source of preventable mortality. We present nine consecutive surgically-managed bilateral EDH cases seen in our institute. . In all the patients, cranial computed tomography (CT) showed bilateral EDH. Surgery was done according to radiologically localized pathology. There was no mortality in our series of cases. Bilateral post-traumatic acute extradural hematomas no longer carry the high mortality of the pre-CT era due to timely diagnosis and expeditious neurosurgical intervention.

**Keywords :** Bilateral extradural haematoma, CT scan, EDH, head injury, vehicular accident.

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### I. Introduction

Extradural hematomas (EDHs) are contact injuries resulting from blunt trauma to the skull.[1] EDH is a major source of preventable mortality.[2] Double acute EDHs are extremely rare. It is an uncommon consequence of closed head injury and the reported incidence ranges from 2 to 25% in different series.[3] It may be unilateral or bilateral. Bilateral acute extradural hematoma (EDH) was rarely detected before the introduction of computed tomography (CT). Roy (1884) reported the first case of bilateral EDH.[4]

### II. Materials And Methods

We present nine consecutive surgically-managed bilateral EDH cases seen in our institute from October 2014 to July 2017. All the cases were examined clinically and plain computerized tomography scan of the head was performed.

### III. Results

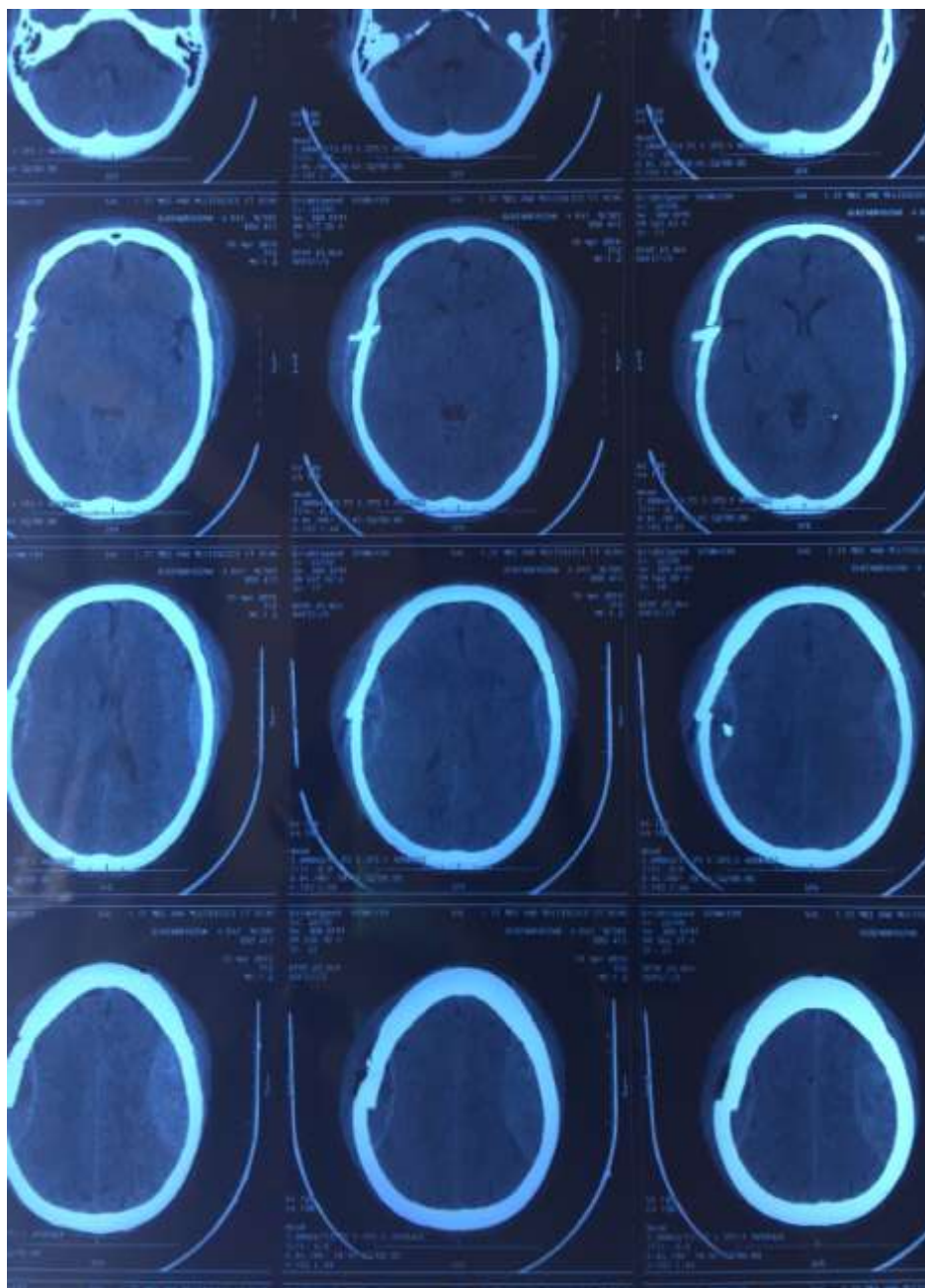
Bilateral EDH was found in all of our patients. The clinical details of all patients and neurosurgical intervention are given in following table.

**Table 1:** Clinical features, management and outcome

CASE	Age/Sex	Time since trauma (hours)	GCS at admission	CT findings/ Radiological Findings	Operative Procedure
1	53/M	24	E2M5V4	Bilateral EDH of parietal region with compression of lateral ventricle	Bilateral trauma flap with EDH evacuation
2	29/M	14	E4M4V5	Left frontal EDH with right parietooccipital	Bicoronal flap with left fronal and right parieto-occipital craniotomy with EDH evacuation
3	30/M	8	E3M4V5	Ipsilateral left parietal and occipital EDH	Left trauma flap
4	26/M	24	E3M5V3	Right frontal and left parietooccipital EDH	Bilateral trauma flap
5	49/M	36	E2M4V3	Right frontal and left temporoparietal EDH	Bicoronal flap
6	20/M	8	E4M4V5	Bilateral frontal EDH	Bicoronal flap with EDH

				with diastasis of coronal suture	evacuation
7	33/M	13	E2M4V5	Left frontal and right temporoparietal EDH	Bicoronal flap with EDH evacuation
8	30/M	24	E2M4V2	Left temporoparietal and right parietal EDH	Bicoronal flap with EDH evacuation
9	26/M	8	E3M5V3	Left frontoparietal EDH and right parietal EDH	Bicoronal flap with EDH evacuation

All patients were males and the age ranged between 20 and 53 years. Glasgow Coma Scale (GCS) at admission ranged between 8 and 13. Vehicular accident was the cause of head injury in all our cases. Arrival time at the hospital from the time of accident ranged between 8 and 24 hours (mean 16 hours). Only two patients had focal neurological deficits. In all the patients, cranial computed tomography (CT) showed bilateral EDH. Surgery was done according to radiologically localized pathology. There was no mortality in our series of cases.



**Figure1:** Pre-op CT scan head showing bilateral EDH



**Figure 2:** Post-op picture of a patient.



**Figure 3:** Post-operative CT head, showing resolution of bilateral EDH.

#### IV. Discussion

Acute bilateral EDH is a rare presentation of head trauma and they represent 0.5–10% of all cases of EDH.[5] Bilateral EDH results when a single directed impact separates the dura mater, this impact is more predominant in the anteroposterior direction than lateral direction.[6] Bilateral EDH should be considered more urgently for neurosurgical intervention. High mortality (42-100%) has been reported in previous series.[5,7] However, in present series, outcomes were excellent and there was no death. Huda reported 34.8% mortality in his study of 46 cases of bilateral EDH.[7]

#### V. Conclusion

Bilateral post-traumatic acute extradural hematomas no longer carry the high mortality of the pre-CT era due to timely diagnosis and expeditious neurosurgical intervention.

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