

Conservative Management of Extradural Hematoma – Case Series Study



Medical Science

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ABSTRACT

Extradural hematoma (EDH) forms 0.5%-1% of all head injuries. In selected patients conservative management may be a feasible option. We report 4 cases which were managed conservatively without neurological sequelae.

All patients were males between 17 to 55 years; location was frontal, parietal, Occipital and volume of EDH between 15-35(mean 24.5) mL. However only patients with GCS 14-15/15 were considered for conservative management.

INTRODUCTION

Extradural Hematoma (EDH) forms 0.5% of all head injuries. Conventionally urgent evacuation is the accepted mode of management. With the routine use of Computer Tomogram (CT) for management of head injury patients, nonoperative management is being used more often in selected patients (1,2). Five cases of EDH which were managed conservatively and discharged without neurological sequelae, are reported here. The common factors amongst these cases have also been enumerated.

MATERIALS AND METHOD

Patients having a traumatic EDH with a Glasgow coma Score (GCS) of 14-15/15 were included in the study. Other inclusion criteria were – Volume less than 35mL, 5 absence of midline shift or mass effect and no other lesion on CT scan. Infratentorial EDH was excluded. All patients were monitored in a neurosurgical Intensive care unit. Specifically GCS, pulse, blood pressure, pupils were observed. The study did not interfere with the set neurosurgical protocols for head injury management.

RAMESH	JOLLASHETTY	RAMESH	YASH
17YEARS	50YEAR	55YEAR	23 YEAR
MALE	MALE	MALE	MALE
RT PARIETAL	RT PARIETAL	RT OCCIPITAL	LT FRONTAL
20 ml	35ml	32ml	11 ml

RESULTS

Four patients were successfully managed conservatively. Mode of injury was road traffic accident in all cases. A summary of the cases is shown in table. All patients were males in the age group 17-55 years, Location was in the parietal region in 2 cases; frontal in one, Occipital one. The volume of EDH ranged from 11ml 35ml. At no point of time any of the four case show any signs of raised intracranial pressure. Patient discharged from ward after necessary counselling.

Discussion

Patients with EDH who are conscious have a mortality of almost nil. Non operative management of EDH is well documented. Patient selection is of utmost importance in conservative management of EDH. Various factors have been found to influence the management strategy.

1) Volume : Dubey et al (3) and Bezircioglu et al (6) have recommended a volume of EDH less than 30mL for conservative management. Bullock et al (7) found 12-38mL suitable, whereas Giordano et al (8) have managed patients with a volume upto 55mL, without surgery.

2) Location: Most studies have taken only supratentorial hematomas into consideration. Wong (9) reports a posterior fossa EDH volume less than 10mL to be favorably managed conservatively. Temporal EDH is unlikely to be managed conservatively (36) as compared to frontal or parietal.

3) GCS: a lower GCS has been associated with a worse outcome in most studies (13,11)

4) Others factors like a thickness > 15mm and a midline shift > 5mm have also been found to unfavorably influence the outcome (12)

5) Another important consideration is the timing of repeat CT scan. Sullivan et al (13) have shown that EDH enlargement occurs within 36 hours and a repeat CT is useful at this time. EDH enlargement occurred in 23% of patient and mean time to enlargement was 8 hours of injury (13)

CONCLUSIONS

Non operative management of EDH can be a safe option in carefully selected patients, where close monitoring is available.

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