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SURGICAL V/S CONSERVATIVE MANAGEMENT OF EXTRADURAL HEMORRHAGE AND ITS MEDICOLEGAL ASPECT.

Medical Science

KEYWORDS : EPIDURAL HEMORRHAGE

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OBJECTIVES-

q To evaluate and compare the mortality of surgical and conservative management of traumatic epidural hemorrhage.

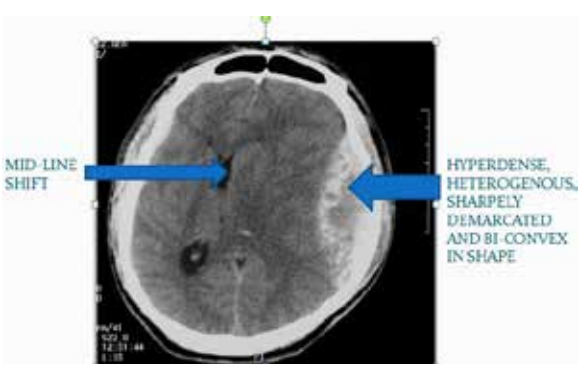
q To study the reasons for conversion to surgical intervention .

q To evaluate the outcome of the two modalities in the terms of residual neurological deficits.

INTRODUCTION AND BASIC ANATOMY-

- EDH is a traumatic accumulation of blood between the inner table of the skull and the stripped-off dural membrane.
- Considered to be a serious complication of traumatic brain injury, encountered in 1-2% of all head trauma pt. and found in 10% of pt. who present with coma.
- 70-80% of EDH aretemporoparietal in location.
- Bleed is usually arterial in origin, but can also result from torn venous sinus in 1/3rd of cases.
- EDH usually is stable, attaining max. sizewith in minutes of injury. However in some cases it may progress during first 24 hours with rebleeding as continous oozing being the course.

TYPICAL NCCT SCAN FINDINGS OF A PT. WITH EDH



METHODOLOGY-

A retrospective comparative study of traumatic EDH treated conservatively and surgically was done over a period of 6 months in B.J.Medical College, A'bad from 01-04-2013 to 31-12-2013.

Selection criteria-

1)Age- 15 to 50 yrs

2)CT Scan with EDH,as major brain

injury, with or without other minor

injuries and pt. with any coagulopathy

not included.

3) EDH volume <30ml.

4) Time b/w injury and start of treatment

be less than 12 hrs

IMPORTANT DETAILS-

1. Age of the pt.
2. Time from injury to management(surgery or start of conservative management).
3. Vitals
4. Glasgow coma score(GCS) after resuscitation.
5. CT scan-
6. Location of EDH
7. Volume and max. thickness
8. Midline shift(MLS)
9. Focal neurological deficits

Detail of the patients managed conservatively-

SITE	NO. OF CASES	OUTCOME		DEATHS
		GOOD	POOR	
FRONTAL	15	12	3	1
TEMPORAL OR FRONTO-TEMPORAL OR PARIETO-TEMPORAL	24	18	6	3
PARIETAL	10	8	2	0
POSERIOR FOSSA	2	1	1	1
OCCIPITAL	2	2	0	0
TOTAL	58	41	12	5

Detail of the patients treated by immediate surgery-

SITE	NO. OF CASES	OUTCOME		DEATHS
		GOOD	POOR	
FRONTAL	21	17	4	1
TEMPORAL OR FRONTO-TEMPORAL OR PARIETO-TEMPORAL	30	24	6	3
PARIETAL	14	11	3	0
POSTERIOR FOSSA	3	2	1	1
TOTAL	71	52	14	5

Details of cases converted from conservative treatment to surgical evacuation-

SITE	REASON FOR CONVERSION	NO. OF CASES	OUTCOME		DEATHS
			GOOD	POOR	
FRONTAL	1) VOMITING AND NEURODETERIORATION 2)INCREASE IN SIZE	2 1	2 1	0 0	0 0
TEMPORAL OR FRONTO-TEMPORAL OR PARIETO-TEMPORAL	1) NEURODETERIORATION 2)INCREASE IN SIZE 3)BOTH NEURODETERIORATION AND INCREASE IN SIZE	5 2 2	3 1 2	2 1 0	1 0 0
PARIETAL	NEURODETERIORATION	3	3	0	0
POSTERIOR FOSSA	FOURTH VENTRICLE COMPRESSION AND VOMITING	1	0	1	1
TOTAL		16	12	4	2

CONCLUSION...

1. 1) Overall outcome of the successfully treated pt. both conservatively and with immediate surgical evacuation is comparable being 76.8% and 79.4% ,respectively($p<0.01$)
2. 2) Mortality is also comparable being 10.44% for conservatively managed pt. and 7.33% for the immediately evacuated pt.
3. 3) Neuro-deterioration being the most common reason for the conversion of conservative management to surgical evacuation(62.5%) , 2nd being increase in size.
4. 4) Posterior fossa EDH having very high mortality of 66% when managed conservatively , being 33% with immediate surgery.(NOTE- no comment can be made regarding its significance due a very small sample size of 6 cases in total).

MEDICOLEGAL IMPORTANCE..

- There have been various documented medico-legal cases and lawsuits filed against general surgeons, neurosurgeons as cases of medicolegal negligence, delayed referrals and seeking higher compensations for managing the pt. conservatively related to the mortalities and neurological deficits.
- There is a lack of actual guidelines and proper documentation of conservative management. But with this study, we concluded that there is a definitive role of conservative management in selected cases of traumatic epidural hemorrhage.

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