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To Study The Outcome of Different Modalities of Management of Subdural Haemorrhage (SDH) In Patients Following Head Injury.

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I. Introduction

Subdural haematoma is collection of blood between the dura and arachnoid usually caused by tear of bridging veins[1]. ct scan of head is the preferred modality for acute subdural haematomas and usually shows a crescent shaped hyper dense lesion crossing suture lines[2]. SDH is managed by two standard burr holes placed on same line as trauma flap followed by saline irrigation using soft jacques cathetar[3], a large burr hole (2.5 cm) i.e. sub temporal craniectomy with gel foam placed into the opening this allows contents to drain into subtemporal muscle[3].,single burr hole with subgalead drain left in situ for 24- 48 hrs when the output is negligible. it has been shown that the drain reduced recurrences rates from 19% to 10%[3].

II. Materials & Methods

STUDY SETTING

- this study, we condected at surat municipal institute of medical education &research,surat, at department of surgery from october 2013 to september 2015 in 20 patients.

STUDY TYPE

- observational study

SAMPLE SIZE

- sample was collected from october 2013 to september 2015 according to inclusion criteria from indoor record case sheet.

SAMPLE TECHNIQUE

- purposive sampling.

INCLUSION CRITERIA

- the study includes all the patients of traumatic injury,

presenting features of

- extradural haemorrhage.

EXCLUSION CRITERIA

- patients of poly trauma
- patients of subadural haemorrhage
- patients of haemorrhagic contusions.

In this study , we divide extradural haemorragic patients under two groups ,in group "A" patient who underwent surgery & in group "B" patients were remain conservative, data collected retrospectively fromOctober 2013 toseptember 2015 from the submitted record case sheets only,result and outcome will be analysed by statistical method applied.

III. Result & Discussion

In this study I have taken 20 cases of SDH.

1 .gender wise distribution.

	M		F	
	NO	%	NO	%
SDH	17	85%	3	15%

There were 85% of male and 15% of female.

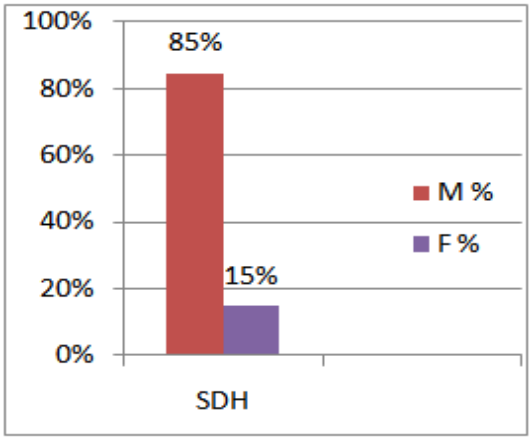
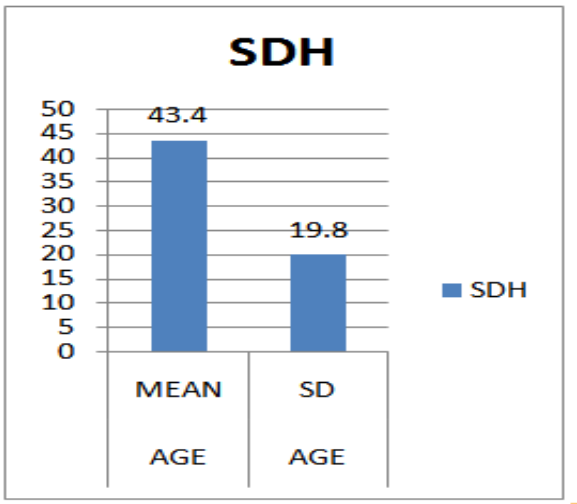


table no 2- age wise distribution

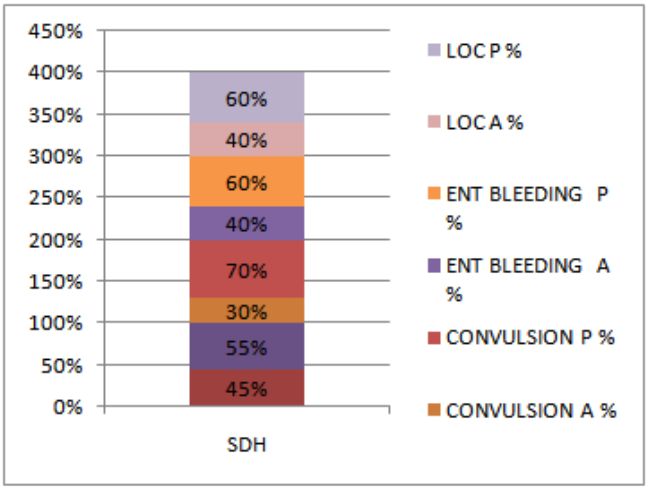
	AGE	AGE
	MEAN	SD
SDH	43.4	19.8



Mean age was 43.4±19.8 .

TABLE NO 3 SYMPTOM WISE DISTRIBUTION

			SDH
VOMITING	A	NO	9
		%	45%
	P	NO	11
		%	55%
CONVULSION	A	NO	6
		%	30%
	P	NO	14
		%	70%
ENT BLEEDING	A	NO	8
		%	40%
	P	NO	12
		%	60%
LOC	A	NO	8
		%	40%
	P	NO	12
		%	60%



In this study ,there were 55% patients had vomiting, 70%had convulsion , 60% had ENT bleeding & loss of consciousness (LOC) in SDH.

TABLE NO 4 DISTRIBUTION FOR LOCAL EXAMINATION DATA

		SDH	
		NO	%
SWELLING	A	12	60%
	P		
		1 (RFP)	5%
		1 (LPR)	5%
		1 (RFPT)	5%
		2 (LFR)	10%
		1 (RPT)	5%
		1 (RF)	5%
		1 (RP)	5%
CLW	A	12	60%
	P	3 (LFR)	15%
		1 (LPF)	5%
		2 (LPR)	10%
		1(RPT)	5%
		1 (LF)	5%

40% patients had swelling and clw.

TABLE NO 5 DISTRIBUTION FOR LOCAL EXAMINATION DATA

		SDH	
		NO	%
ABRASION	A	12	60%
	P	1 (RF)	5%
		1(LF)	10%
		1 (CHEST)	5%
		1 (LARM)	5%
		1 (L KNEE)	5%
		1 (LER)	5%
		1 (LFR)	5%
BLACK EYE	A	15	75%
	P	3(LT)	15%
		1 (RT)	5%
		2 (BOTH)	5%

40% had abrasion and 25% had black eye.

6. distribution for investigation data.

			SDH			
			NO	%	NO	%
		ABSENT	13	65%		
		PRESENT	1(#RFP)	5%	1(#RNL)	5%
XRAY SKULL			1(#LT)	5%		
			1(#LPR)	5%		
			1(#RTE)	5%		
			2(#RTP)	10%		

			SDH			
			NO	%	NO	%
		ABSENT	0	0	0	0
BRAIN SITE		PRESENT	(LFTR)1	5%	(LCC)1	5%
			(RFTP)2	10%	(RTE)1	5%
			(RFP)1	5%	(LFR)2	10%
			(RTP)2	10%	(LTP)1	5%
			(ROCC)1	5%	(RFR)1	5%
			(LFTP)2	10%	(LTE)2	10%
			(LFP)2	10%	(LFTRO)1	5%

TP	temporoparietal
TPO	temporoparietooccipital
PR	parietal
FR	frontal
TE	temporal
PT	paritotemporal
FPT	frontoparitotemporal
FP	frontoparital
FPO	frontoparitooccipital
FTPO	frontotemporoparitooccipital
OCC	occipital

35% patients had skull fracture shows, low incidence and commonly were on the right frontotemporoparitalregion , left frontotemporoparital region respectively.

TABLE 7. DISTRIBUTION FOR SIZE AND MIDLINE SHIFT DATA.

	SDH	
	SD	MEAN
SIZE	8.46	11.74
MIDLINE SHIFT	6.7	15.25

There were mean size of haematoma was 11.74±8.46.
Mean midline shift was 15.25±6.7.

TABLE 8. DISTRIBUTION FOR MANAGEMENT

	OPERATIVE	OPERATIVE	CONSERVATIVE	CONSERVATIVE
	NO	%	NO	%
SDH				
	7	35%	13	65%

In this study ,
35% operated and 65% were remain conservative.

TABLE 9. DISTRIBUTION FOR OUTCOME . (FOR CONSERVATIVE PATIENT) .

	OUTCOME					
	GOOD	GOOD	EXPIRED	EXPIRED	TOTAL	
	NO	%	NO	%	NO	%
SDH	11	84%	2	16%	13	100%

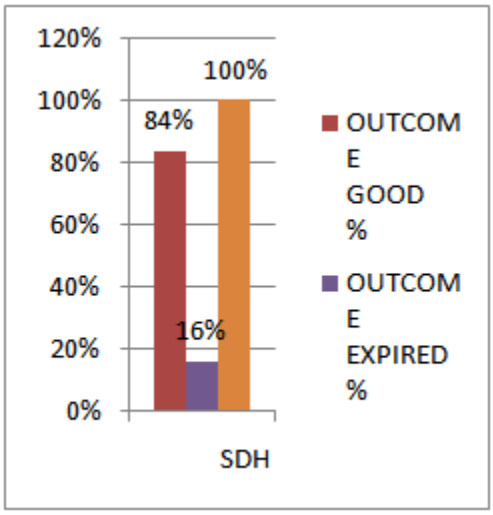
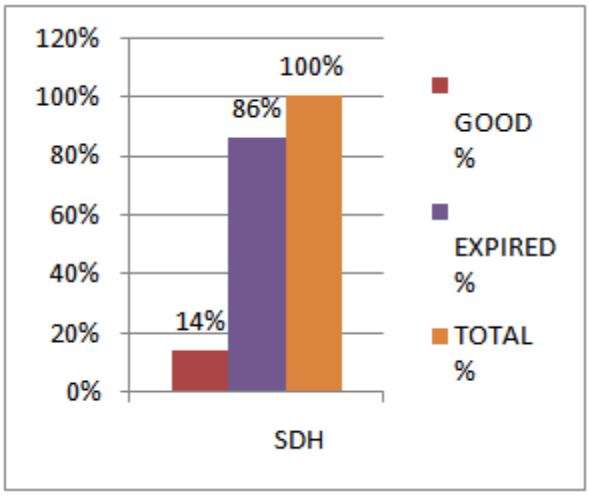


TABLE 10. DISTRIBUTION FOR OUTCOME.(FOR OPERATIVE PATIENT)

	GOOD	GOOD	EXPIRED	EXPIRED	TOTAL	
	NO	%	NO	%	NO	%
SDH	1	14%	6	86%	7	100



There were out of 20 patients 13 were remain conservative in which 84% had good outcome and 16% were expired, in operated cases 7 operated , in which 14% had good outcome and 86% were expired.

IV. Discussion

In this study I have taken 20 cases of SDH.
1 .gender wise distribution.
There were 85% of male and 15% of female.
Male ratio was high because of professional and working male and not working female.

According to DrGODFRE BARASA ,majority of the patients were male over 90% of the patients were male due to attributed to alcoholics and likely to suffer from trauma 4.

TABLE no 2- AGE WISE DISTRIBUTION

Mean age was 43.4±19.8 .
Which shows middle age patients were more affected.

TABLE NO 3 SYMPTOM WISE DISTRIBUTION.
In this study, there were 55% patients had vomiting, 70%had convulsion , 60% had ENT bleeding & loss of consciousness (LOC) in SDH.
Which shows that more cases had history of convulsion than vomiting , ENT bleeding and LOC.
By April kahan ,study found that SDH patients had various symptoms like slurred speech, numbness , severe headache, visual problem5.
By M cole, 1961 , found that in study of 50 cases of SDH have been seen convulsion were prominent part of clinical picture6.

TABLE NO 4 DISTRIBUTION FOR LOCAL EXAMINATION DATA
40% patients had swelling and clw.
Which shows in SDH there were equal incidence of swelling andclw in the patients and majority of patients had no external injury.

TABLE NO 5 DISTRIBUTION FOR LOCAL EXAMINATION DATA
40% had abrasion and 25% had black eye.
Which shows more commonly patients affected with abrasion and less commonly with black eye.

TABLE NO 6. DISTRIBUTION FOR INVESTIGATION DATA.
35% patients had skull fracture shows, low incidence and commonly were on the right frontotemporoparitalregion , left frontotemporoparital region respectively, moreover CT is better evalution tool for diagnosis of fracture.

TABLE 7. DISTRIBUTION FOR SIZE AND MIDLINE SHIFT DATA.
There were mean size of haematoma was 11.74±8.46.
Mean midline shift was 15.25±6.7.
Which shows , more patients were affected with 11 mm of size of haematoma and more cases had midline shift of 15 mm of size indicated prognostic factor.

TABLE 8. DISTRIBUTION FOR MANAGEMENT
In this study ,
35% operated and 65% were remain conservative.
Which shows ,majority of cases remain conservative and less cases done with craniotomy and burr-hole surgery.
In one study according to willian et al7.Where 16% of those with burr-hole without drain deteriorate post operatively and 11% required reevacuation compared to 7% with drain in situation who deteriorated post operatively and required reevacuation ,64% with twist drill craniostomy without suction who headed reoperation.
Some authored like stansic metal (2005) who concluded that the neither the use of drain ,duration of drain nor volume of drain had significant influence on recurrence rate8.
In 1970 benders work group retrospectively analysed 100 patients reacted for SDH without surgery and patients were shown recovery with conservative management9.

TABLE 9. DISTRIBUTION FOR OUTCOME . (FOR CONSERVATIVE AND OPERATIVE PATIENT) .
There were out of 20 patients 13 were remain conservative in which 84% had good outcome and 16% were expired, in operated cases 7 operated , in which 14% had good outcome and 86% were expired.
Which shows more cases were remain conservative and the outcome was good , and in operated cases outcome was bad.
Two surgery among new surgery one in Canada and one in UKfound that conservative management is seldom practiced due to poor outcome10,11.

V. Conclusion

Better survival & decreased morbidity rates in patients attending the tertiary care hospital.

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