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Study of 150 consecutively surgically treated patients with chronic subdural haematoma at Chris Hani Baragwanath Hospital

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CHAPTER-3

3.0 RESULTS

Of the 150 patients, 75% are males and 25% are females. Their age ranged11 years to 88 years with mean of 49.7years. Most frequent clinical presentation was headache 48%. Other frequent presentation were hemiparesis or plegia 39%, impaired consciousness 32% and confusion 14%. Compared with younger patients, the elderly are more likely to present with hemiparesis or plegia, impaired consciousness and confusion 61%,38%,26% respectively. In younger patients headache is the leading symptom in 57% followed by hemi syndrome 31%,altered Consciousness 31% and confusion in 24,5%.

Results illustrating the relationship between various factors and clinical outcome as measured by Glasgow outcome score (GOS) are given below.

3.1 Age

The patients were divided into age groups of 15. Morbidity and mortality were then assessed for each age group. Age was not known in two patients.

Table 3.1 Relationship between age groups and morbidity and mortality

Age groups (yrs)	No. of patients	Morbidity(GOS 2&3)	%Morbidity	Mortality (GOS 1)	%Mortality
0-15	5	1	20%	1	20%
16-30	6	0	0%	0	0%
31-45	53	4	7.5%	8	15%
46-60	42	5	12%	3	7%
>60	42	5	12%	2	5%

Age group	Poor outcome GOS 1,2,& 3	Good outcome GOS 4&5
<60 years	22 (20.1 %)	84 (79%)
>60years	7 (16.6%)	35 (83.2%)

Table 3.2 Relationship between two age groups and outcome

Pearson chi 2 (1) = 0. 3191 pr = 0.572

There was no statistically significant risk of outcome between the two age groups at the 5% level of significance (P=0.05) as demonstrated by the results above: Nevertheless there were differences in the mortality between the two age groups. The mortality in the age group <60 years was 11.6%, and 0.84% in the >60 years.

3.2 Sex

The outcome figures for the sexes are as represented in Table 3.2

Sex	Good GOS 4&5	Poor GOS 1,2&3
Male	**105**	**17**
Female	**16**	**12**

Table 3.3 Relationship between sex group and outcome

Analysis of this table reveals a Pearson chi (1) =12.2153 with a p value of 0.000.These are highly significant at the p=0.05 level of significance; hence female carries a significant risk of poor outcome.The mortality in males and females were 6.5% and 21.42% respectively.

3.3 predisposing factors

The outcomes figure for trauma and non- trauma are as represented in Table3.3

GOS	Trauma	Non trauma
Poor GOS 1,2&3	12 (8%)	12 (8%)
Good GOS 4&5	55 (37%)	25 (17%)

Table 3.4 Outcomes in relation to trauma and non trauma groups

There were 46 patients who could not give history of event leading to their illness.

3.4 Duration of symptoms to treatment

Statistical comparison between those presenting less than two weeks, between two weeks and one month and more than 1 month to Glasgow outcome score were analysed.

GOS	< 2 weeks	< 2weeks - <1month	>1 month
1	11	3	0
2	5	1	0
3	8	1	0
4	16	4	0
5	85	8	6

Table3.5 Comparison of Glasgow outcome scale to duration

There is no statistically significant difference between duration and GOS ($x^2 = 6.7267$, $P = 0.566$) hence duration of symptoms to treatment is not a determining factor for outcome.

3.5 Neurological status

Markwalder grading system was used in the evaluation of the preoperative neurological status of the patients.

Table 3.6 Relationship between Markwalder grade and outcome

Markwalder grade	GOS 4&5 Good outcome	GOS 1,2&3 Poor outcome
1	31	3
2	65	4
3	22	9
4	3	13

There was very significant correlation between preoperative grading and Glasgow outcome score: patients with a good grading have a significantly better chance of a good outcome than those presenting with higher Markwalder grade Pearson chi 2 =51.7155 P=0.000.

3.6 Pupils

Abnormal pupils are those which are unequal, non-reactive or sluggish reactive. The state of pupils had a profound influence on the likely outcome of chronic subdural haematoma, as shown in table 3.6

Glasgow outcome score	Normal pupil	Abnormal pupil
Good (GOS 4&5)	**110**	**10**
Poor (GOS 1,2 & 3)	**15**	**15**

Table 3.7 Effect of pupils on outcome

The statistical significance was at a 5% level of significance (Pearson chi 2 (1) =30.000) P = 0.000

3.7 Computerized Axial Tomography Scans of the Brain

CT scan findings of raised intracranial pressure and presence of unilateral or bilateral haematomas, haematoma thickness and midline shift were correlated to outcome. None of these results were statistically significant at the p =0.05 level.

The number of left sided haematomas were more than the right sided (57% VS 43%). The reason for this dominance is not known. Out of twenty-two cases of bilateral haematomas only four cases had poor outcome.

3.8 Type of operation

Surgical approaches are restricted to three techniques with multiple technique was used in six cases of recurrences. Irrigation was used in all cases, intra-operatively. The results are shown below

Glasgow outcome score	Burr hole	Subtemporal craniectomy	Craniotomy	Multiple
Good (4&5)	94	19	3	4
Poor (1,2&3)	19	9	0	2

Table 3.8 Effect of operation on outcome

Analysis of this table reveals an x2 =4.7138 with P value of 0.194. This is not statistically significant at the P=0.05 level.

3.9 Symptomatic recurrence

There is no statistically significant difference in the outcome in patients who presents with recurrence as shown below

GOS	No recurrence	recurrence
Poor	26	4
Good	114	6

Table 3.9 Effect of recurrence on outcome