



Original Research Article

Incidence of chronic subdural haematoma in different age groups and its surgical management

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ABSTRACT

Background: Chronic SDH is a condition which usually affects the elderly population. Trauma is the most common cause of chronic subdural haematoma. Surgical Treatment of chronic subdural haematoma includes burr holes with or without drainage. In patients with membrane formation, craniotomy is considered.

Aims: To know the incidence of chronic subdural haematoma in different age groups, the risk factors for its occurrence and its surgical management.

Settings and Design: The incidence of chronic SDH in different age groups and the different surgical procedures done for its management were noted.

Materials and Methods: Fifty patients of chronic SDH who underwent surgical intervention were analysed.

Statistical analysis: Statistical evaluation was done

Results: Mean age was 62.06 years. 54% of patients were in the age group of >62 years. Mostly (56%) chronic subdural haematoma was on the right side. Right side chronic subdural haematoma patients had mean age of 60.8 years, left side chronic subdural haematoma patients had mean age of 56.7 years and bilateral chronic subdural haematoma patients had mean age of 75.6 years. Trauma (46%) was most commonly associated with chronic SDH formation. Burr hole evacuation was the preferred surgical treatment modality (92%).

Conclusion: Chronic SDH usually occurs in elderly population. Bilateral Chronic SDH is commonly seen in elderly patients. Traumatic brain injury is the commonest predisposing factor for its occurrence. In some elderly patients even a trivial injury may lead to the occurrence of chronic SDH.

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1. Introduction

Chronic subdural hematoma is an encapsulated collection of blood and fluid on the surface of the brain.

It is a condition which usually affects the elderly population. Upto 90% of chronic subdural haematoma patients are elderly.¹

Falls and motor vehicle accidents are the most common cause of chronic subdural haematoma.² Many patients do

not remember any history of trauma to the head and even if they had, it is usually trivial.

In elderly patients, falls are a common precursor for chronic subdural haematoma occurrence.

The other causative factors include long-term heavy alcohol use, long-term use of aspirin, anti-inflammatory drugs, anticoagulant medication and diseases associated with deranged blood clotting.³

Surgical Treatment of chronic subdural haematoma includes burr holes with or without drainage. In a

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few patients, where membrane formation is there, small craniotomy with aid of endoscopic removal or wide craniotomy with removal of the hematoma and membrane resection is warranted.⁴

We did a study to know the incidence of chronic subdural haematoma in different age groups, the risk factors for its occurrence and its surgical management.

2. Material and Methods

Fifty patients were included in the study.

All patients of chronic SDH who underwent surgical intervention were analysed.

2.1. Inclusion criteria

1. Patients of chronic SDH requiring surgical intervention.

Statistical evaluation was done using SPSS software for windows.

3. Results

Most of the patients (38%) were in the age group of 62-75 years [Table 1].

Table 1: Age distribution

Age (years)	Frequency	Percentage (%)
20 – 33	1	2
34 – 47	5	10
48 – 61	17	34
62 – 75	19	38
76 – 89	8	16
Total	50	100

Mean age was 62.06 years.

54% of patients were in the age group of >62 years.

In 56% of patients chronic subdural haematoma was on the right side. In 28% of patients it was on left side and in 16% of patients it was bilateral [Figure 1].

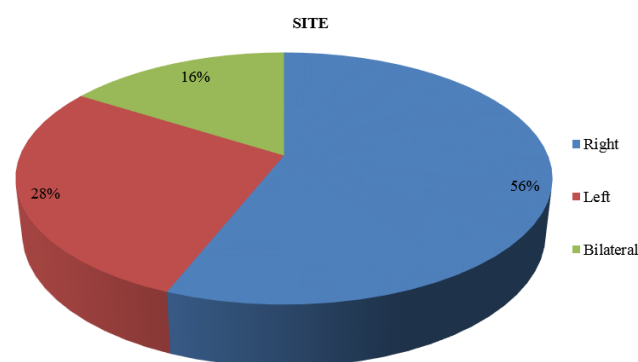


Fig. 1: Site of Chronic SDH

Right side chronic subdural haematoma had mean age of 60.8 years, left side chronic subdural haematoma had mean age of 56.7 years and bilateral chronic subdural haematoma had mean age of 75.6 years [Table 2].

Table 2: Chronic SDH laterality with age

Chronic SDH	Mean age (years)
Right	60.82
Left	56.78
Bilateral	75.62

Trauma (46%) was most commonly associated with Chronic SDH formation [Table 3].

Table 3: Associated conditions

Conditions	Frequency	Percentage (%)
Trauma	23	46
Hypertension	8	16
Cerebrovascular diseases	2	4
Cardiovascular diseases	2	4
Diabetes	5	10
Renal diseases	1	2
Pulmonary diseases	1	2
Liver diseases	1	2

Burr hole evacuation was the preferred surgical treatment modality (92%) [Table 4].

Table 4: Type of procedure done

Procedure	Frequency	Percentage (%)
Burr hole	46	92
Craniotomy	4	8

4. Discussion

Mean age in our study was 62.06 years. The mean age of chronic subdural haematoma patients has been reported as 60.4 years in India.⁵ Asaduzzaman et al. found mean age of 52.8 years in their study.⁶

In a study by Mekaj et al., mean age was 62.85 years.⁷ Ak et al. found mean age of 62.06 years.⁸

Sousa et al. found that 56.8% of their patients were ≥ 65 years. In our study 54% of patients were ≥ 62 years.⁹ These findings confirm the notion that chronic subdural haematoma is common in elderly patients.

In our study chronic subdural haematoma was on the right side mostly (56%), followed by on the left side (28%) and bilateral in 16%. In a study by Kitya et al., chronic subdural haematoma was on the Right side mostly (42.3%), followed by Left side (36.3%) and bilateral in 21.4%.¹⁰

In our study, right side chronic subdural haematoma patients had mean age of 60.8 years, left side chronic subdural haematoma patients had mean age of 56.7 years

and bilateral chronic subdural haematoma patients had mean age of 75.6 years. In a study by Kitya et al., right side chronic subdural haematoma patients had mean age of 58.6 years, Left side chronic subdural haematoma patients had mean age of 59.4 years and bilateral chronic subdural haematoma patients had mean age of 66.9 years.¹⁰ This indicates that in elderly patients who generally have brain atrophy, there is higher chance of occurrence of bilateral chronic subdural haematoma.

Trauma was most commonly (46%) associated with chronic subdural haematoma formation in our study. This was similar to findings in most of the studies in which traumatic brain injury was the most common cause of chronic subdural haematoma formation. Huang et al. found traumatic brain injury in 74.49% of patients they studied.¹¹ Rovlias et al. found traumatic brain injury in 51.01% of patients they studied.¹²

There were many patients with unknown etiology. Chronic subdural haematoma might have developed in these patients as a delayed complication of trivial trauma which went unnoticed.

In our study, hypertension was the next common associated disease, present in 16% of patients followed by diabetes (10%). Cerebrovascular and cardiovascular diseases were present in 4% of patients respectively.

In a study by Nnadi Mathias O. N. et al., hypertension as associated disease was present in 20% of patients and diabetes was present in 9% of patients.¹³ As chronic SDH is more common in elderly patients, we commonly find Chronic SDH in association with these ailments.

In our study, burr hole drainage was performed in 92% of patients and craniotomy was done in 8% of patients. In a study by Farhat Neto, burr hole drainage was done in 94% of patients and craniotomy was done in 6% of patients.¹⁴

In a study by H. Toi et al., most of the patients (90.5%) underwent burr hole drainage and irrigation and only 1.5% underwent craniotomy.¹⁵

So, burr hole remains the gold standard procedure for most of the cases of chronic SDH.

5. Conclusion

Chronic SDH is a common neurosurgical entity.

It commonly occurs in elderly population.

In our study, mean age was 62.06 years. 54% of patients were in the age group of >62 years.

Mostly (56%) chronic subdural haematoma was on the right side. Right side chronic subdural haematoma patients had mean age of 60.8 years, left side chronic subdural haematoma patients had mean age of 56.7 years and bilateral chronic subdural haematoma patients had mean age of 75.6 years. So, bilateral chronic SDH is more common in elderly.

Traumatic brain injury is the commonest predisposing factor for chronic SDH occurrence.

Some elderly patients without any known predisposing factor may have sustained a trivial injury which can later on lead to the occurrence of Chronic SDH in them.

Burr hole drainage remains the commonest surgical procedure done for this condition.

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7. Conflict of Interest

The authors declare they have no conflict of interest.

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