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Chronic Subdural Haematoma: Analysis of 198 cases.

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Aims: *A series of cases with chronic subdural haematoma operated in neurosurgery is analysed. Materials and* ***Methods:*** *198 patients treated between 2014 and 2017 were included in the study. Mean age was 76.4 yrs. and male / female ratio was 1.7 / 1. The patients were classified both on admission and at discharge according to the Markwalder Scale. The standard operative procedure consisted of enlarges Single burr-hole, rinsing the subdural space with isotonic normal rating and insertion of subdural drain.*
Conclusion: *In chronic Subdural haematoma, operation is safe and results are comparable to those of major series of the literatures.*
Keywords*: chronic subdural haematoma, safe operation, head injury*.

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I. Introduction

The neurosurgical procedure for chronic subdural haematoma (CSDH) is usually safe. The operations were performed in our department from 2014 to 2017. In the literatures Mellergard and Wisten[4] made a comparison with regards to the number of recurrences in the CSDH treated by consultant neurosurgeon and trainee neurosurgeon. The aim of the present study is to evaluate if the results of surgery obtained in our patients are comparable to the major series in the literature in term of outcome, recurrences and mortality.

II. Materials and Methods

From January 2014 to December 2017, patients were surgically treating for CSDH in our department. These cases were analysed retrospectively. 116 were males and 72 females (m/f 1.7/1). Mean age was 76.4 years and age ranged from 29 to 96 years. In all cases diagnosis of CSDH was made by computed tomography (CT) Scan and in some cases by Magnetic Resonance Imaging. Neurological assessment on arrival of our institution was performed by Markwalder Scale[5] for CSDH (Table-I).

The same criteria was applied for evaluation of outcome.

In 126(64%) patients had trauma of various degrees of severity was the cause of CSDH, while the cause was undetermined in the remaining 72 (36%). In 59 (30) cases the haematoma was bilateral.

A co-existent systemic disease was identified in 109 (55%) patients. There was arterial hypertension in 71 (36%) patients, cardiomyopathy in 32 (17%), psycho-organic syndrome in 22 (11%), diabetic in 22 (11%), obstructive chronic bronchopathy in 3 (2%), chronic renal failure in 4 (2%) cases, haematological diseases in 4 (1%) cases. Associated risk factor, were treatment with anticoagulant drugs in 24 (12%), with anti-aggrigant drugs in 24 (12%) and chronic alcoholism in 4 (2%) cases.

At the time of hospitalisation, the clinical grading of each patient was done according to Markwalder Scale. 105 patients were grade I (53%), 79 were grade II (40%), 6 were grade III (3%), 8 patients were grade IV (4%).

Table: Markwalder Scale

Grade O	:	No neurologic deficit.
Grade I	:	Mild symptoms such as headache; absent or mild neurologic deficits such as reflex asymmetry.
Grade II	:	Drowsiness or disorientation with variable neuroloic deficits such as hemiparesis.
Grade III	:	Stupor, but appropriate responses to noxious stimuli; severe focal signs such as hemiplegia.
Grade IV	:	Coma with absence of motor response to painful stimuli; decerebrate or decorticate posturing.

Bilateral haematomas were treated in the same sitting. In 119 cases (60%) surgery was carried out in local anaesthesia and in general anaesthesia in the remaining 79 (40%) cases.

For all patients, the surgical procedure was standardized: after a skin incision approximately 8 cm, a bur hole was placed over the thickest portion of the haematoma and subsequently enlarged up to a diameter or approximately 3 cm. The dura matter was incised in a crowned shaped to fashion and after coagulation of dural borders, the external capsule of the haematoma coagulated and incised leading to evacuation of fluid material.

Irrigation with normal saline was the performed until a clear reflux was obtained. In 55 cases (28%) the internal capsule of the haematoma was sharply fissured because of underlying fluid collection while in 142 cases (72%) it was left untouched. In all cases 10 Fr drain tube was positioned in subdural space and connected to a closed drainage system under very gently suction. The drainage was left in place for 48 to 72 hours. Patients in good clinical condition (grade 0 – 1 Markwalder Scale) were allowed to walk around in the hospital as soon as they were able to. This position according to prospective randomized study of NakaJima6 is not at a risk factor for recurrence. The patients did not receive any specific medication such as steroids, anticonvulsants or hyperhydration.

III. Results

Six patients (3%) of this series died in perioperative period. Four of these patients were older than 85 years and two were chronic alcoholic. In five patients death occurred after the first procedure. One patient having polycythemia died after the second surgical procedure carried out after a three months as he developed a fresh subdural haematoma. 145 patients(73%) were discharged within seven days and 53 patients (27%) were discharges home or to a nursing home within three weeks of surgery.

There were postoperative complication in eight cases (4%). Five patients (high grade of Markwalder scale) suffered episode of dyspnoea caused by bronchopneumonia and airway secretion accumulation. The symptom with each case resolved with appropriate antibiotic therapy. Three patients had partial motor seizure which were managed successfully with anticonvulsant drugs. Two patients had a minor pulmonary embolism. Minor complication such as deep venous thrombosis and urinary infection were seen in some cases.

In 12 cases (6.3%) there was a recurrence of CSDH on the same side within three months of surgery. None of these patients were older than 75 years, two of them receiving anticonvulsant therapy.

The clinical picture at discharge was evaluated according to Markwalder scale : 166 patients (84%) were grade 0, 24 patients (12%), grade I, four patients (2%) grade II, two patients (1%) grade III and two patients (1%) grade IV.

IV. Discussion

The surgical procedure is relatively straight forward and the procedure is standardized 1,3,8. The performance of the operation is not specified in any of the major series except for Mellergard and Wisten.[4] We compared the data of our series with eight series reported in literature, selected on the number of cases treated and the parameters used for evaluation of patients in concordance with those chosen by us[1,7,13] our comparative analysis with series of Ernestes et al[1], Sambasivan et al[12] and Hamilton et al[11], only took into account the subgroup of patients treated with simple burrhole.

Holy and included those treated with other techniques. The following aspects were examined : mean age, concomitant pathology and risk factors, etiology, neurological status of the patients on arrival and discharge, outcome, recurrences and mortality.

Mean age of our patients was higher with an average of 76.4 years versus 63 years in other series 1,7,13 concomitant systemic illness were higher in number in our series. Trauma as the cause of CSDH was 2/3 of our cases and in other reported series.[1,7,13]

Neurological status upon arrival as well as discharge was evaluated with Markwalder Scale. Comparative data was performed with data of Ernestus et al[1], Kotwica et al[7], Drapkin[10] and Richter et al[9], who adopted the same method of evaluation.

The outcome at the time of discharge from hospital was better in our series at 84% and 12% of the patients were classified grade 0 and 1 respectively. This is in comparison to the average incidence of grade 0 and 1 respectively. This is in comparison to the average incidence of grade 0 and 1 of 46.4% and 29.4% respectively as reported in the literature[1,9,10]. The incidence of patients discharged with higher grades is similar to the results in the literature[1,9,10]. The number of recurrences in our series (6.3%) causes to those of the other authors, even though the percentage varies in the literature 2.3% (Kotwica et al[7] on 131 cases) to 18.3% (Sambasivan et al[12] on 60 patients) with an average of 6.6%[1, 7-14].

References

[1]. Ernestus R-I, Beldzinski P, Lanfermann H, Klug N. Chronic subdural haematoma : Surgical treatment and outcome in 104 patients. Surg Neurol. 1997; 48 : 220-5.
[2]. Lind CR, Lind CJ, Mee EW. Reduction in the number of repeated operations for the treatment of subacute and chronic subdural haematomas by placement of subdural drains. J Neurosurg. 2003; 99 : 44-6.
[3]. Weigel R, Schmiedek P, Krauss JK. Outcome of contemporary surgery fro subdural haematoma : Evidence based review. J. Neurol Neurosurg Psychiatry. 2003; 74 : 937-43.
[4]. Mellergard P, Wisten O. Operation and re-operations for chronic subdural haematomas during a 25 year period in a well defined population. Acta Neurochir (Wien). 1996; 138 : 708-13.
[5]. Markwalder TM, Steinsiepe KF, Rohner M, Reichenbach W, Markwalder H. The course of chronic subdural haematomas after burr-hole craniostomy and closed system drainage. J Neurosurg. 1981; 55 : 390-6.

[6]. Nakajima H, Yasui T, Nishikawa M, Kishi H, Kann M. The role of postoperative patient posture in the recurrence of chronic subdural haematoma. A prospective randomized trial. Surg Neurol. 2002; 58 : 385-7.
[7]. Kotwica Z, Brzezinski J. Chronic subdural haematoma treated by burr holes and closed system drainage : Personal experience in 131 patients. Br J Neurosurg. 1991; 5 : 461-5.
[8]. Penehet G, Loiseau H, Castel JP. Hematomes sous-duraux chroniques bilateraux (in French). Neurochirurgie. 1998; 44 : 247-52.
[9]. Richter HP, Klein HJ, Schafer M. Chronic subdural haematomas treated by enlarged burr hole craniotomy and closed system drainage. Retrospective study of 120 patients. Acta Neurochir (Wien). 1984; 71 : 179-88.
[10]. Drapkin AJ. Chronic subdural haematoma : Pathophysiological basis for treatment. Br J Neurosurg. 1991; 5 : 467-78.
[11]. Hamilton MG, Frizell JB, Trammer BI. Chronic subdural haematoma : The role for craniotomy revaluated. Technique and application. Neurosurgery. 1993; 33 : 67-72
[12]. Sambasivan M. An over view of chronic subdural haematoma : Experience with 2300 cases. Surg Neurol 1997; 47 : 418-22.
[13]. Suzuki K, Sugita K, Akai T, Takahat T, Sonobe M, Takahashi S. Treatment of chronic subdural haematoma by closed-system drainage without irrigation. Surg Neurol 1998; 50 : 231-4.
[14]. Mori K, Maeda M. Surgical treatment of chronic subdural haematoma in 500 consecutive cases : Clinical characteristics, surgical outcome, complications and recurrence rate. Neurol Med Chir (Tokyo) 2001; 41 : 371-81.

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