

*Research Article***Surgical Management of Spontaneous Intracerebral Hemorrhage**

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Abstract

Introduction: Spontaneous intracerebral hemorrhage (ICH) is a blood clot that arises in the brain parenchyma in the absence of trauma or surgery. **Patients and Methods:** It is retrospective single blind controlled study on 20 patients with spontaneous ICH admitted at Minia university hospital. **Results:** Our study performed on twenty patients in neurosurgery unit, Minia university hospital. All of these patients had intracerebral hemorrhage confirmed by CT. **Patients and Methods:** It is retrospective single blind controlled study on 20 patients with spontaneous ICH admitted at Minia university hospital. **Discussion:** Spontaneous ICH remains a significant cause of morbidity and mortality throughout the world. **Conclusion:** Surgical treatment of ICH is preferable than medical treatment especially in young patients with large expanding hematoma in the absence of other medical problems.

Keywords: Spontaneous intracerebral hemorrhage, brain parenchyma

Introduction

Spontaneous intracerebral hemorrhage (ICH) is a blood clot that arises in the brain parenchyma in the absence of trauma or surgery. This entity accounts for 10 to 15% of all strokes and is associated with a higher mortality rate than either ischemic stroke or subarachnoid hemorrhage (Matteu et al., 2003).

The common causes of SICH are hypertension, aneurysm, arteriovenous malformation (AVM), coagulopathies and vasculopathies (Chen et al., 2007).

Intracranial hemorrhages can be classified by anatomical or etiological aspects. According to anatomical considerations parenchymatous, subarachnoid, subdural, epidural, supra- and infratentorial hemorrhages have been found (Reichart and Frank, 2011).

According to etiological aspects primary or spontaneous hemorrhages can be distinguished from secondary hemorrhages. Primary haemorrhages are spontaneous hemorrhages, which are mainly caused by arterial hypertensive diseases. Secondary hemorrhages are due to traumatic, tumorous or pharmacological causes (Kirkman et al., 2008).

Depending on localization and volume of the hematoma, ICH may cause different neurological deficits. Like in ischemic insults, in ICH neurological symptoms are developed within minutes to hours. Symptoms of ICH can be divided into general manifestation and manifestations due to the localization of hematoma (Qureshi et al., 2001).

It is point of discussion for more than 100 years whether ICH should be evacuated surgically. Surgeons noticed that the prognosis for patients still remained poor, independently whether they were surgically treated or not. Up to 30% of all patients suffering from ICH die within 30 days after stroke, and many patients surviving ICH remain in a severe affected vegetative state (Mendelow et al., 2013).

Thus the outcome of a large part of patients is still unsatisfactory. Multiple attempts have failed to find objective criteria to decide, whether surgery is useful or not in a single case, although the surgical techniques have been improved during the recent years (Mendelow et al., 2005).

Aim of the work:

The aim of the work is to evaluate the surgical management of intracerebral hemorrhage.

Patients and Methods

It is retrospective single blind controlled study on 20 patients with spontaneous ICH admitted at Minia university hospital.

Inclusion criteria:

Patients with spontaneous intracerebral hemorrhage.

Patients age from 40ys to 70ys.

Exclusion criteria:

Patients with traumatic intracerebral hemorrhage.

Patients with cerebellar hemorrhage.

Patients who are unfit for operation.

Patients who are improved on medical treatment.

Patients prior to surgery are subjected to:

History:

Personal history: as regards age and special habits (alcohol or smoking).

Complaint: most of patients come with deteriorated conscious level and weakness in one side of the body ensured by the relatives.

Present history: the onset, course and duration of the complaint, symptoms of cranial nerves affection, motor system, sensory system affection, sphincteric disturbance, speech disorder, symptoms of increased intracranial tension and symptoms of other system affection.

Past history: to exclude chronic diseases as diabetes mellitus and hypertension, operations and drugs intake.

Examination:

A- General examination:

Temperature, pulse (to exclude atrial fibrillation), blood pressure (to exclude hypertension) and respiratory rate.

Table: Initial presentation of patients and number of patients:

Initial presentation of patients:	Number of patients:
Disturbed conscious level	16 (80%)
Motor weakness	16 (80%)
Headache and vomiting	3 (15%)
Aphasia	8 (40%)

Discussion

Spontaneous ICH remains a significant cause of morbidity and mortality throughout the world. Although ICH has traditionally lagged behind ischemic stroke and aneurysmal subarachnoid hemorrhage in terms of evidence from clinical trials to guide management, the past decade has seen a dramatic increase in studies of ICH intervention to determine the outcome.

ICH is a medical emergency. Rapid diagnosis and attentive management of patients with ICH is crucial, because early deterioration is common in the first few hours after ICH onset.

More than 20% of patients will experience a decrease in the Glasgow Coma Scale (GCS) of

2 or more points between the prehospital emergency medical services assessment and the initial evaluation in the emergency department (moon et al., 2008).

Furthermore, another 15% to 23% of patients demonstrate continued deterioration within the first hours after hospital arrival (Brott et al., 1997) (Fan et al., 2012).

The risk for early neurological deterioration and the high rate of poor long-term outcomes underscore the need for aggressive early management.

The high rate of early neurological deterioration after ICH is related in part to active bleeding

that may proceed for hours after symptom onset. Hematoma expansion tends to occur early after ICH and increases risk of poor functional outcome and death (Brott et al., 1997) (Delcourt et al., 2012).

Final Conclusion:

Surgical treatment of ICH is preferable than medical treatment especially in young patients with large expanding hematoma in the absence of other medical problems.

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