

## Intracerebral haemorrhage following surgical evacuation of chronic subdural haematoma: case report

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**SUMMARY:** Intracerebral haemorrhage following surgical evacuation of chronic subdural haematoma: case report.

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*Intracerebral haemorrhages occurring after removal of chronic subdural haematoma have been reported as a rare but nearly uniformly devastating postoperative occurrence with incidence ranges between 0,7 and 5%. The absence of a particular attention paid to such complication in literature prompted us to present this report adding our personal experience to the cases already described in the literature.*

**RIASSUNTO:** Emorragia intraparenchimale cerebrale correlata all'evacuazione chirurgica di un ematoma sottodurale cronico: caso clinico.

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*L'emorragia intraparenchimale cerebrale successiva all'evacuazione di un ematoma sottodurale cronico è stata riportata come una rara ma devastante complicazione post-operatoria con incidenza che varia tra 0,7 e 5%. L'assenza in letteratura di una particolare attenzione su tale evenienza ci ha indotto a presentare questo caso che si aggiunge ai casi già descritti nella letteratura.*

KEY WORDS: Subdural haematoma - Complications - Cerebral haemorrhage.  
Ematoma sottodurale - Complicazioni - Emorragia cerebrale.

### Introduction

Intracerebral haemorrhages occurring after removal of chronic subdural haematoma have been reported as a rare but nearly uniformly devastating postoperative occurrence with incidence ranges between 0,7 and 5%.

### Case report

This 82-year-old man was admitted to our institution four weeks after minor head trauma; he complained about progressive headaches, aphasia and a right-side hemiparesis.

A computerized tomography (CT) scan showed a left, fronto-parieto-temporal layer of chronic subdural haematoma with mod-

erate shift of the midline structure. Under local anaesthesia a frontal burr-hole was made leaving in situ a closed-system drainage.

After an initial improvement, on the first postoperative day the patient suffered generalized seizures and rapid loss of consciousness; CT scan revealing a frontal-parietal intraparenchymal blood collection (Fig. 1). Then he was admitted to an intensive care unit where, despite osmotic, antiepileptic drugs and corticosteroid treatment, his general and neurological conditions continued worsening and he died 18 days later. Autopsy was performed excluding the presence of cerebral vascular anomalies.

### Discussion and conclusion

The most insidious complication of treatment for chronic subdural haematoma is intracerebral haemorrhage, following removal of haematoma, with incidence ranges between 0,7 and 5% (1, 2), nevertheless few cases are described in the literature (3-5).

In published reports, the symptoms due to haemorrhage appeared immediately after surgery or several days after evacuation of haematoma and developed homolaterally or in an atypical site.

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Although the underlying pathophysiology of this unpredictable complication has not been definitively elucidated, recent evaluations suggest the fundamental role of a sudden variation in cerebral blood flow as the consequence of cerebral decompression.

SPECT studies have demonstrated that cerebral blood flow in old patient with chronic subdural haematoma is diminished particularly in the thalamus and in the homolateral basal ganglia and is followed postoperatively by a progressive normalisation of blood flow in these areas (6, 7). It seems therefore reasonable to hypothesize that sudden restoration of normal pressure in regions of faulty cerebral vascular autoregulation due to subcortical swelling underlying surface compression, focal impedance of the venous drainage or ischemic loss of CO<sub>2</sub> reactivity might in turn lead to the vascular damage that results in intraparenchymal haematoma. By the light of these considerations we recommend a slow and gradual evacuation of the chronic subdural haematoma.



Fig. 1 - CT scan shows a frontal-parietal intraparenchymal haematoma.

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