

Management of post-decompressive craniectomy intracranial hypertension caused by intramural hematoma of temporal muscle

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Introduction

Decompressive craniectomy has been used effectively to treat traumatic brain swelling in recent years. However, we observed an uncommon complication of decompressive craniectomy.

Methods

In this study, we retrospectively reviewed the records of 168 patients admitted with severe head injury from Jan. 1997 to Dec. 2009. Eight patients developed intractable increased intracranial pressure within one day after craniectomy due to intramural hemorrhage of the temporal muscle, which was confirmed by CT scans. All patients were treated by resection of the muscle.

Results

The initial Glasgow Coma Scale score was 7.42 ± 0.78 . The mean intracranial pressure (ICP) was 41.7 ± 8.59 mmHg before resection of the muscle and 14.81 ± 8.07 mmHg immediately after the surgery. Their mean intensive care unit stay was 11.25 ± 5.99 days. On the basis of Extended Glasgow Outcome Scale scoring, 6 patients (75%) had a favorable outcome at their 12-month follow-up.

Conclusions

To our knowledge, this is the first study to report on the long-term outcome of patients treated by resection of the temporal muscle after craniectomy. We find that resection of the muscle can control ICP and results in favorable outcome and fair masticatory function.

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Learning Objectives

Intramural hematoma of temporal muscle should be considered in patients with elevated intracranial pressure after decompressive craniectomy. Better control of intracranial pressure with favorable long-term outcome and serviceable masticatory function can be reached by excision of the temporal muscle.