**Hemicraniectomy**

- Intraoperative Seizure Under General Anesthesia Not Detected by EEG: A Case Report
- Effect of endovascular therapy in large anterior circulation ischaemic strokes: A systematic review and meta-analysis of randomised controlled trials
- When Late Hemicraniectomy is Stated in a Stroke Patient?
- Corrigendum to "Infection-related failure of autologous versus allogenic cranioplasty after decompressive hemicraniectomy - A systematic review and meta-analysis" [Brain Spine 3 (2023) 101760]
- Prior Thrombectomy Does Not Affect the Surgical Complication Rate of Decompressive Hemicraniectomy in Patients with Malignant Ischemic Stroke
- Initial experience with minimally invasive endoscopic evacuation of intracerebral hemorrhage in the setting of radiographic herniation
- Noninvasive and reliable automated detection of spreading depolarization in severe traumatic brain injury using scalp EEG
- Brain metastasis localized to the same area of infarction: illustrative case

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**Decompressive craniectomy** of one side.

Although it was still performed with some frequency prior to the twentieth century, its resurgence in modern form became possible only upon the development of precision cutting tools and sophisticated post-operative care such as antibiotics.

Though the procedure is considered a last resort, some evidence suggests that it does improve outcomes by lowering intracranial pressure (ICP).

A large frontotemporoparietal DC (not less than 12 x 15 cm or 15 cm diameter) is recommended over a small frontotemporoparietal DC for reduced mortality and improved neurologic outcomes in patients with severe TBI.

Data suggest that unilateral decompressive craniectomy (DC) has superiority in lowering ICP, reducing the mortality rate, and improving neurological outcomes over unilateral routine temporoparietal craniectomy. However, it increases the incidence of delayed intracranial hematomas and subdural effusion, some of which need secondary surgical intervention. These results provide information important for further large and multicenter clinical trials on the effects of DC in patients with acute post-traumatic BS.

### Indications

**Hemicraniectomy Indications**
**Technique**

Hemicraniectomy surgical technique.

**Complications**

Hemicraniectomy Complications.

**Case series**

A total of 248 patients who underwent DHC were included in the study, with 155 patients (62.5%) in the SQ group and 93 (37.5%) in the discarded group. Patients in the discarded group were more likely to have a diagnosis of severe TBI (57.0%), while the most prevalent diagnosis in the SQ group was malignant stroke (35.5%, p < 0.05). There were 8 (5.2%) abdominal surgical site infections and 9 (5.8%) abdominal hematomas. The AC group had a significantly higher reoperation rate (23.2% vs 12.9%, p = 0.046), with 11% attributable to abdominal reoperations. The average cost of a reoperation for an abdominal complication was $40,408.75 ± $2273. When comparing the AC group to the SC group after cranioplasty, there were no significant differences in complications or surgical site infections. There were 6 cases of significant bone resorption requiring cement supplementation or discarding of the bone flap. Increased mean operative charges were found for the SC group compared to the AC group ($72,362 vs $59,726, p < 0.001).

Autologous bone flaps may offer a cost-effective option compared to synthetic flaps. However, when preserved in abdominal SQ tissue, they pose the risk of resorption over time as well as abdominal surgical site complications with increased reoperation rates. Further studies and methodologies such as cryopreservation of the bone flap may be beneficial to reduce costs and eliminate complications associated with abdominal SQ storage.

