

# Acute subdural hematoma surgery

## Indications

- Impact of frailty in elderly patients undergoing decompressive craniectomy after traumatic brain injury
  - Indications and scientific support for supratentorial unilateral decompressive craniectomy for different subgroups of patients: A scoping review
  - Decompressive craniectomy in trauma: What you need to know
  - Decompressive craniectomy in children: indications and outcome from a tertiary centre
  - Unintentional Plastic Blister Ingestion Leading to Intestinal Perforation: A Report of Two Cases
  - Influence of Blood Components on Neuroinflammation, Blood-Brain Barrier Breakdown, and Functional Damage After Acute Subdural Hematoma in Rats
  - Prognostic Factors of Mortality and Functional Outcome for Acute Subdural Hematoma: A Review Article
  - Middle Meningeal Artery Embolization in Pediatric Patients
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Acute subdural hematoma (ASDH) causing significant [mass effect](#), which may be effectively reduced by surgery, is supposed to be an indication for surgery.

In general, initial surgical indication may be based on the patients GCS score, pupillary examination, and CT findings. Neurological deterioration and/or increase in ICP may also be an important factor in delayed decision <sup>1)</sup>.

## Presurgical management

Although the presurgical management of patients with acute [traumatic subdural hematoma](#) prioritizes rapid [transport](#) to the [operating room](#), there is conflicting [evidence](#) regarding the importance of time interval from injury to surgery with regards to outcomes.

## Surgical Technique

[Acute Subdural Hematoma Surgical Technique](#).

## Postoperative care

Includes monitoring of resolution of pneumocephalus, mobilization and drain removal, and monitoring for signs of SDH reaccumulation. Medical considerations include seizure prophylaxis and management as well as management and resumption of antithrombotic and anticoagulant medication <sup>2)</sup>.

## Outcome

Significantly better outcome of clinical recovery with less cases of morbidity and deaths had occurred in patients in which TSDH was removed with the [Decompressive craniectomy](#) (DC) technique within 24 hours after the time of injury and also if a DC surface had had size over 40 ccm, in comparison to the group of patients that had TSDH removed with DC technique within longer period of time than 24 hours after the time of injury and also better than the control group <sup>3)</sup>.

In surgery for [acute subdural hematoma](#) (ASDH), the bone flap can be fixed onto the skull, or left "riding" to provide partial skull decompression, or removed.

A study concluded that removing the bone flap after ASDH evacuation was not associated with a better outcome, and recommend replacing the bone flap if brain conditions allow. Further research is required to evaluate the role of skull decompression in surgery for ASDH <sup>4)</sup>.

Acute [subdural hematoma](#) evacuations frequently necessitate large craniotomies with extended operative times and high relative blood loss, which can lead to additional morbidity for the patient.

## References

<sup>1)</sup>

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<sup>2)</sup>

Gerard C, Busl KM. Treatment of acute subdural hematoma. Curr Treat Options Neurol. 2014 Jan;16(1):275. doi: 10.1007/s11940-013-0275-0. PMID: 24363148.

<sup>3)</sup>

Girotto D, Ledić D, Daji V, Vujković Z, Mihelcić N. Neurosurgical procedure for treatment of traumatic subdural hematoma with severe brain injury: a single center matched-pair analysis. Coll Antropol. 2014 Dec;38(4):1255-8. PubMed PMID: 25842771.

<sup>4)</sup>

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