# Chronic subdural hematoma surgery complications

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Common postoperative complications include acute epidural and/or subdural bleeding, tension pneumocephalus, intracranial hematomas and ischemic cerebral infarction.

Failure of the brain to re-expand, pneumocephalus, incomplete evacuation, and recurrence of the fluid collection are the most frequent.

## Recurrence

see Chronic subdural hematoma recurrence.

## Seizures

Seizures after chronic subdural hematoma

Postoperative seizures after Chronic subdural hematoma surgery

Antiepileptic drug for chronic subdural hematoma

## Intracerebral hemorrhage

Intracerebral hemorrhage (ICH): occurs in 0.7–5%. Very devastating in this setting: one–third of these patients die and one-third are severely disabled.

## Acute subdural hematoma

Acute subdural hematoma after chronic subdural hematoma surgery

## Brain herniation

Chronic subdural hematoma (CSDH) with brain herniation signs is rarely seen in the emergent department. As such, there are few cumulative data to analyze such cases.

## Failure of postoperative cerebral reexpansion

A wide variation in postoperative drainage volumes is observed during treatment of chronic subdural hematoma (CSDH) with twist-drill or burr-hole craniostomy and closed-system drainage.

The postoperative drainage volumes varied greatly because of differences in the outer membrane permeability of CSDH, and such variation seems to be related to the findings on the CT scans obtained preoperatively. Patients with CSDH in whom there is less postoperative drainage than expected should be carefully observed, with special attention paid to the possibility of recurrence [1)].

Patients with high subdural pressure showed the most rapid brain expansion and clinical improvement during the first 2 days. Nevertheless, a computerized tomography (CT) scan performed on the 10th day after surgery demonstrated persisting subdural fluid in 78% of cases. After 40 days, the CT scan was normal in 27 of the 32 patients. There was no mortality and no significant morbidity. A study suggests that well developed subdural neomembranes are the crucial factors for cerebral reexpansion, a phenomenon that takes at least 10 to 20 days. However, blood vessel dysfunction and impairment of cerebral blood flow may participate in delay of brain reexpansion. It may be argued that additional surgical procedures, such as repeated tapping of the subdural fluid, craniotomy, and membranectomy or even craniectomy, should not be evaluated earlier than 20 days after the initial surgical procedure unless the patient has deteriorated markedly [2)].

## Postoperative pneumocephalus

see Tension pneumocephalus after chronic subdural hematoma evacuation.

## Remote cerebellar hemorrhage (RCH)

see Remote cerebellar hemorrhage.

## Epidural hematoma

After chronic subdural hematoma evacuation surgery, the development of epidural hematoma is a very rare entity.

Akpinar et al. report the case of a 41-year-old man with an epidural hematoma complication after chronic subdural hematoma evacuation. Under general anesthesia, the patient underwent a large craniotomy with closed system drainage performed to treat the chronic subdural hematoma. After chronic subdural hematoma evacuation, there was epidural leakage on the following day.

Although trauma is the most common risk factor in young CSDH patients, some other predisposing factors may exist. Intracranial hypotension can cause EDH. Craniotomy and drainage surgery can usually resolve the problem. Because of rapid dynamic intracranial changes, epidural leakages can occur. A large craniotomy flap and silicone drainage in the operation area are key safety points for neurosurgeons and hydration is essential [3].

## Intracranial subdural empyema

A case of intracranial subdural empyema following chronic subdural hematoma drainage [4].

## Skin depression

see Skin depression after chronic subdural hematoma surgery.

## Oculomotor nerve palsy

see Oculomotor nerve palsy in chronic subdural hematoma.

## Pseudohypoxic brain swelling

Pseudohypoxic brain swelling (PHBS) is a rare and potentially fatal complication that may occur in patients following uneventful brain surgery. Fan presented a case of PHBS after chronic subdural hematoma surgery that developed after drilling and drainage. Neuroimaging findings, pathogenic factors, and therapy are also discussed [5].

# Cerebral Hyperperfusion Syndrome

see Cerebral Hyperperfusion Syndrome in Chronic Subdural Hematoma.

# References

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