Chronic subdural hematoma recurrence

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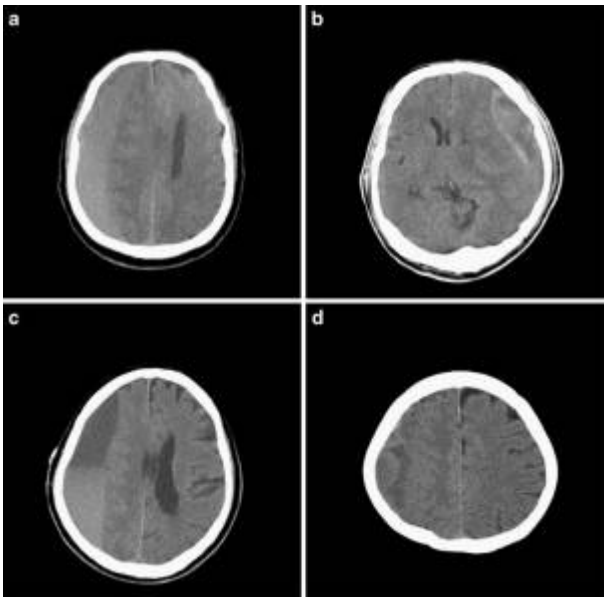

The most frequent chronic subdural hematoma surgery complication is chronic subdural hematoma recurrence requiring reoperation. Although several definitions of recurrence have been proposed [1] one of the most consensual definitions of recurrence is the association between new clinical symptoms and hematoma revealed by CT scans. Thus, one can wonder whether a systematic CT scan is necessary after CSDH evacuation for a patient without symptoms.

Dspite patients experiencing high chronic subdural hematoma recurrence and readmission rates after

surgical management of nontraumatic subdural hematomas (SDHs), few studies have examined the causes and predictors of unplanned readmissions in this population on a national scale.

Shaftel et al. analyzed independent factors predicting 30-day hospital readmissions after surgical treatment of nontraumatic SDH in patients who survived their index surgery and evaluate hospital readmission rates and charges.

Using the Nationwide Readmissions Database, they identified patients who underwent craniotomy for nontraumatic SDH evacuation (2010-2015) using a retrospective cohort observational study design. National estimates and variances within the cohort were calculated after stratifying, hospital clustering, and weighting variables.

Among 49 013 patients, 10 643 (21.7%) had at least 1 readmission within 30 days of their index treatment and 38 370 (78.3%) were not readmitted. Annual readmission rates did not change during the study period (P = .74). The most common primary causes of 30-day readmissions were chronic subdural hematoma recurrence (n = 3949, 37.1%), venous thromboembolism (n = 1373, 12.9%), and delayed hyponatremia and syndrome of inappropriate antidiuretic hormone secretion (n = 1363, 12.8%). Comorbidities that independently predicted readmission included congestive heart failure, chronic obstructive pulmonary disease, coagulopathy, diabetes mellitus, liver disease, lymphoma, fluid and electrolyte disorders, metastatic cancer, peripheral vascular disease, psychosis, and renal failure (P ≤ .03). Household income in the 51st to 75th percentile was associated with a decreased risk of readmission.

National trends in 30-day readmission rates after nontraumatic SDH treatment by craniotomy provide quality benchmarks that can be used to drive quality improvement efforts on a national level [2)]

Prognostic models

Prognostic models for chronic subdural hematoma recurrence.

Epidemiology

Chronic subdural hematoma recurrence after evacuation occurs in approximately 10% of chronic subdural hematomas, and the various Chronic subdural hematoma surgery interventions are approximately equivalent. Corticosteroids are associated with reduced recurrence but also increased morbidity. Drains reduce the risk of recurrence, but the position of drain (subdural vs subgaleal) did not influence recurrence. Middle meningeal artery embolization is a promising treatment warranting further evaluation in randomized trials [3)].

In 2 large cohorts of US patients, approximately 5% to 10% of patients who underwent surgery for nontraumatic SDH were required to undergo repeated operation within 30 to 90 days. These results may inform the design of future prospective studies and trials and help practitioners calibrate their index of suspicion to ensure that patients are referred for timely surgical care [4)].

Recurrence rates after chronic subdural hematoma (CSDH) evacuation with any of actual techniques twist drill craniostomy (TDC), burr hole craniostomy, craniotomy range from 5% to 30%. [5].

Grading

Oslo grading system.

Risk factors

Chronic subdural hematoma recurrence risk factors

Prevention

Chronic subdural hematoma recurrence prevention

Treatment

Chronic subdural hematoma recurrence treatment.

Systematic Review and Meta-Analysis

Chronic subdural hematoma recurrence Systematic Review and Meta-Analysis

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Systematic reviews

Chronic subdural hematoma recurrence after evacuation occurs in approximately 10% of chronic subdural hematomas, and the various Chronic subdural hematoma surgery interventions are approximately equivalent. Corticosteroids are associated with reduced recurrence but also increased morbidity. Drains reduce the risk of recurrence, but the position of drain (subdural vs subgaleal) did not influence recurrence. Middle meningeal artery embolization is a promising treatment warranting further evaluation in randomized trials [6].

Case series

see Chronic subdural hematoma recurrence case series.

Case reports

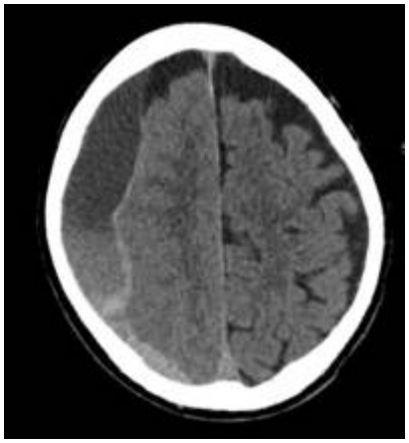
Chronic subdural hematoma recurrence case reports.

Chronic Subdural Hematoma Recurrence Cases from the General University Hospital of Alicante

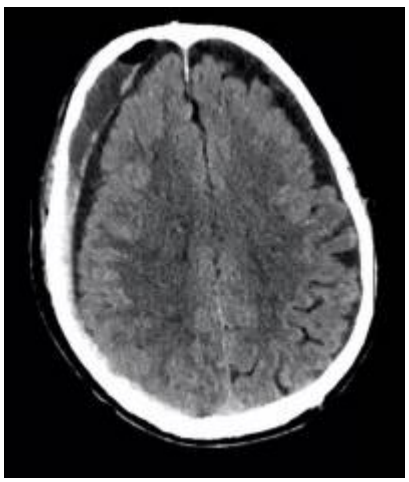
A 73-year-old man

Active smoker Undifferentiated non-small cell lung cancer Chronic obstructive pulmonary disease Type 2 diabetes mellitus Cirrhosis Dupuytren contracture

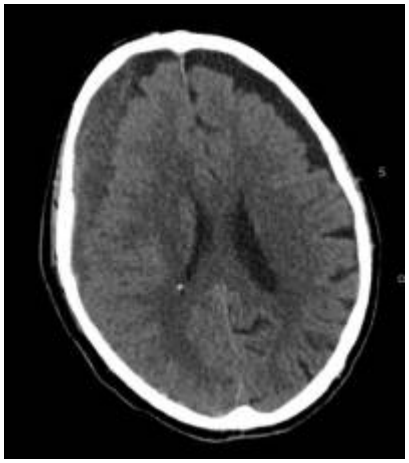
Prophylactic holocranial RT 25 Gy



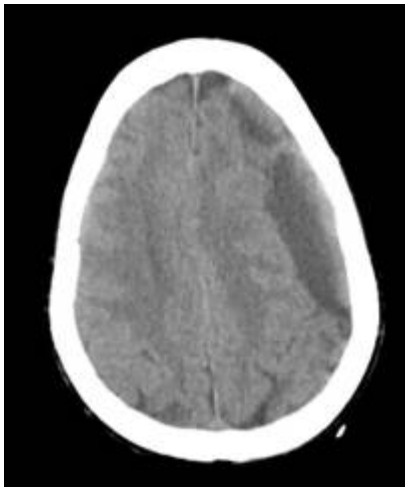
CT Post-surgical changes after drainage of the subdural hematoma through a right frontal trephine, with reduction of the subdural hematoma in the right convexity that now presents a maximum diameter measured in coronal of 10 mm (previously 28 mm) and some pneumocephalus bubbles. It presents hyperdense content in sloped areas and in the anterobasal region. The mass effect has also been reduced with a reduction in the collapse of adjacent sulci as well as the collapse of the right lateral ventricle, with less midline displacement and subfalcine herniation (4 mm, previously 8 mm).



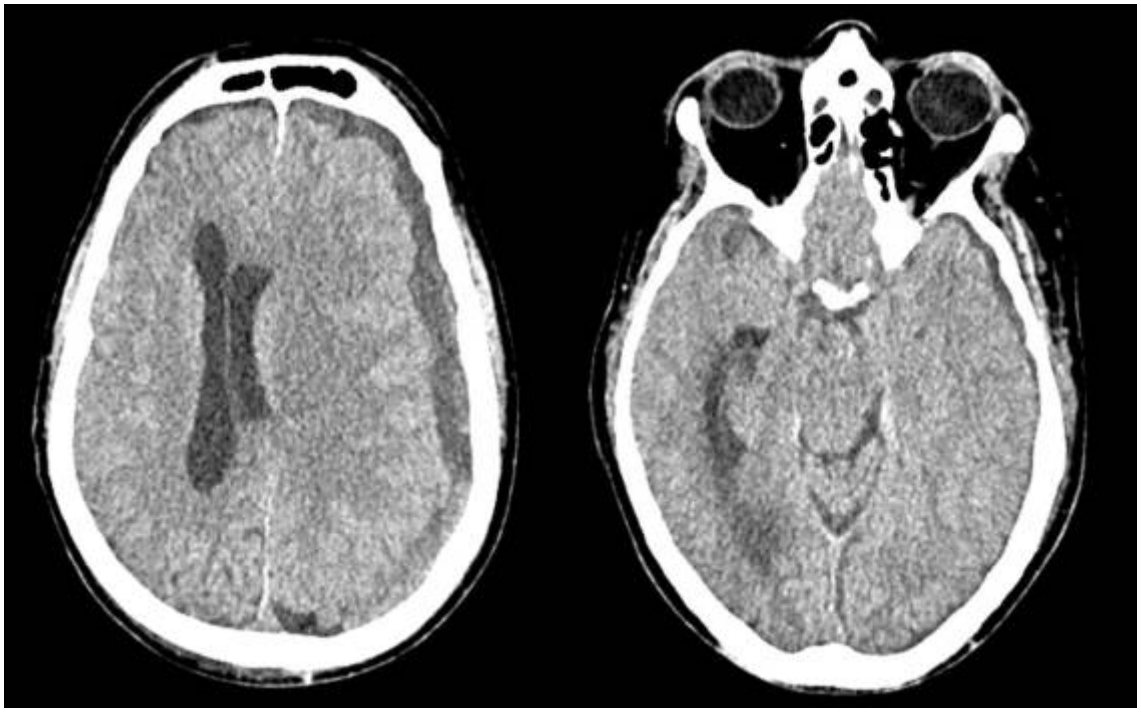
Later



A 79-year-old man, anticoagulated with Acenocoumarol, referred from primary care due to disorientation, unsteady gait, frequent memory loss, psychomotor retardation, a tendency to sleep, and nocturnal aggression of 1 week's evolution. Associated intense headache of new appearance in recent days.



Left hemispheric extraaxial collection that occupies the surface of the left frontal-parietotemporal lobes, 2.3 cm maximum thickness, semilunar morphology with hypodense areas, and more hyperdense peripheral areas, related to chronic subdural hematoma, with areas of rebleeding . It produces a considerable mass effect with collapse of the left lateral ventricle, deviation from the midline of 1.4 cm, and moderate dilatation of the contralateral ventricle. Erasing of the furrows of the left convexity, secondary to cerebral edema. There is no uncal displacement or effacement of cisterns that suggest transtentorial herniation.



Marked worsening of the neurological condition, and drowsiness 3 days after the operation. A greater deformation of the midbrain and collapse of the right perimesencephalic cistern are observed, these findings being compatible with left uncal herniation

References

1)

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2)

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3) , 6)

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