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Repeated computed tomography after mild traumatic brain injury with intracranial hemorrhage

Jeppe Damgren Vesterager[1], Jens Dyrskjøt[1], Boris Cehov[1], Jens Jakob Riis[1]
[1] Aalborg University Hospital, Department of Neurosurgery

Background

Traumatic brain injury (TBI) with intracranial hematoma and a Glasgow coma score (GCS) ≥13 is defined as complicated mild traumatic brain injury (mTBI). Often these patients are admitted for observation and undergo repeated computed tomography of cerebrum (CTc). The clinical value of repeated CTc is not clear. This study aimed to review the extent and clinical value of repeated CTc for patients admitted for observation with complicated mTBI.

Methods

Retrospectively cohort study, using prospectively collected data from patients charts in a major academic trauma center. All patients admitted with complicated mTBI in a period of 32 months were included. Data on repeated CTc, the reasoning for the repeated CTc and the neurosurgical intervention was gathered. Descriptive statistics were performed.

Results

In a study period of 32 months, a total of 203 patient charts were screened from which 127 patients were included. Repeated CTc was performed in 74.0 % of patients. Neurosurgical interventions were performed on three patients, corresponding to 3.2 % of the patients who had repeated CTc. Of the three patients, two patients had a decline of two or more points on GCS, while the last patient developed hemiparesis. All patients who underwent neurosurgical intervention had a component of acute subdural hematoma.

Conclusion

Patients awake with complicated mTBI, repeated CTc should not be performed, unless clinically indicated to save both healthcare cost, increase flow in departments and reduce exposure to radiation for patients. This also applies for patients in anticoagulant-/antithrombotic-treatment.