

Seizure following acute subdural hematoma

Epileptic complications are common after acute SDH evacuation, and should be suspected in patients with an unanticipated depressed level of [consciousness](#) after surgery. Seizures worsen early functional outcome, but delayed favorable recovery is possible. Therefore, one should be cautious when discussing prognosis in the early postoperative period of patients with epileptic complications ¹⁾.

[Subdural hematomas](#) (SDH) are associated with [seizures](#) and epileptiform discharges, but little is known about the prevalence and impact of seizures, status epilepticus and epileptiform discharges on outcomes in patients with isolated [acute subdural hematoma](#) (aSDH).

Continuous EEG reports from 76 adult patients admitted to Rush University Medical Center with aSDH between 01/2009 and 03/2012 were reviewed. Clinical and radiographic findings, comorbidities, treatment, and outcome parameters mortality, discharge destination, need for tracheostomy/percutaneous endoscopic gastrostomy (PEG) placement and length of stay (LOS) were assessed. Univariate and multivariate analyses were performed to assess impact of clinical seizures, status epilepticus and epileptiform EEG on outcomes.

Of 76 patients with aSDH who underwent EEG monitoring, 74 (97.4%) received antiseizure prophylaxis. Thirty-two (41.1%) patients had seizures, the vast majority of which were clinical seizures. Twenty-four (32%) patients had epileptiform EEG findings. Clinical or nonconvulsive status epilepticus (SE) was diagnosed in 12 (16%) patients. Clinical seizures were not associated with outcome parameters. Epileptiform EEG findings were independently associated with longer hospital LOS (13 versus 8 days, $p = 0.04$) and ICU-LOS (10 versus 4 days, $p = 0.002$). SE also predicted longer ICU-LOS (10 versus 4 days, $p = 0.002$). Neither epileptiform EEG nor SE was significantly related to mortality, discharge destination or need for tracheostomy/PEG placement.

Seizures and epileptiform EEG findings are very common in patients with aSDH despite antiseizure prophylaxis. While clinical seizures did not impact outcomes, presence of epileptiform EEG findings and status epilepticus was independently associated with longer ICU-LOS and hospital LOS ²⁾.

1)

Rabinstein AA, Chung SY, Rudzinski LA, Lanzino G. Seizures after evacuation of subdural hematomas: incidence, risk factors, and functional impact. J Neurosurg. 2010 Feb;112(2):455-60. doi: 10.3171/2009.7.JNS09392. PubMed PMID: 19698050.

2)

Pollandt S, Ouyang B, Bleck TP, Busl KM. Seizures and Epileptiform Discharges in Patients with Acute Subdural Hematoma. J Clin Neurophysiol. 2016 Jun 20. PubMed PMID: 27748723.

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