

Commentary

Chronic subdural hematoma (CSDH) is one of the most common disorders encountered in the neurosurgical practice worldwide.^[1,2] The incidence of CSDH is 58.1/100,000 patients at the age of 65 years or older, while this rate is expected to rise in the near future due to aging world population.^[1,3] Etiology of CSDH is mostly a minor-moderate head trauma that has happened a few weeks ago and has injured the parasagittal and/or cortical bridging veins.^[1] Hematoma accumulates in the subdural cavity resulting in slow-onset clinical findings as follows: headache, paresis, confusion, and aphasia/dysphasia.

There are three surgical approaches used for the treatment of CSDHs as follows: twist-drill craniostomies (skull opening up to 5 mm), burr-hole craniostomy

(skull opening up to 30 mm), and craniotomy (skull opening larger than 30 mm).^[2,4] The overall mortality of surgical evacuation of CSDH ranges between 0% and 32% whereas the recurrence rate is 0.36%–33.3%.^[1] Recurrence of CSDH, by definition, is symptomatic reaccumulation of the hematoma with signs of cerebral compression observed on postoperative brain scans within 3 months following the surgery. Recurrence is the major problem of CSDH and might necessitate repeat surgeries in follow-ups.^[2,5]

In a systematic review made by Ivamoto *et al.*,^[1] important prognostic factors related to CSDH management have been enlightened as follows: closed drainage systems are associated with reduced recurrence rates; twist-drill craniostomies are equivalent to burr-hole craniostomies

in treatment effect; elevated bed-header after burr-hole craniostomy might reduce the length of hospital stay; irrigation of subdural cavity with thrombin solution might reduce recurrence risk; and closed drainage system up to 48 h (instead of 96 h) following twist-drill craniostomy is better in respect of decreased complication rates. Similarly, in a Cochrane's review of randomized controlled trials about the use of postoperative drain in CSDH cases, it has been summarized that drain use is superior to no drain use by significantly reducing recurrence rate.^[5]

The amount of air left inside the subdural cavity following CSDH surgery is a prognostic factor for hematoma recurrence. Different modalities have been introduced to reduce the amount of residual air in the subdural cavity.^[2] Martin *et al.*^[6] have presented their case series of 18 patients with CSDH operated with a technique of double drains (one is kept for 48 h, and the other one is extracted immediately after the evacuation of air bubbles through saline infusion from the former drain). In their paper, they stated that no patient had CSDH recurrence at a mean follow-up time of 9.3 months. The described technique has some pros and cons as follows: the physical principle behind the setting is logical and feasible, yet inserting the dorsal drain (which stays in for 48 h) could potentially give harm to eloquent brain areas. Hence, more prospective studies in multiple clinical settings with large cohort of patients should be conducted to make more conclusive statements on the topic.

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