Reviewer’s report

Title: A comparative study of irrigation versus no irrigation during burr hole craniostomy to treat chronic subdural hematoma

Version: 0 Date: 11 Jun 2017

Reviewer: Mehmet Sabri GÜRBÜZ

Reviewer's report:

* In your abstract (background); you start with mentioning BHD and in conclusion you start with irrigation. Conclusion should match to the aim of the study. Also, I am not sure whether BHD is the most widely used technique. As far as I know, BHDI is the most popular one instead. In your no.23 reference; read Table 2. In that study (Weigel et al.) table 2 shows that there are 37 studies using irrigation and 10 studies not preferring it by the year of 2003.

* Moreover, you should organize your abstract as if you are asking a question in the aim (your postulation) and you are answering that question in the conclusion. I would prefer to say (briefly): 'BHDI is a widely used method for the evacuation of CSDH. However it is not clear whether the irrigation improves the prognosis or gives rise to additional complications instead.'

* Was closed drainage system applied to the patients? It is not clear. You should mention this in 'surgical technique' section of methods. In BHDI, evacuation of the hematoma is done by irrigating. How is this done in BHD technique? Only opening the outer membrane of hematoma and inserting the drain? I would prefer to say: The drain was inserted to subdural space after spontaneous drainage of hematoma immediately after opening the dura. In BHDI, however, further irrigation with saline etc. was performed. You should describe it to make it easily understandable for the readers.

* Why did you include only the patients undergoing one hole BHD/BHDI? What did this selection add to your study? Please explain this.

* Subdural hematomas seen in the given figures are sub-acute subdural hematoma rather than chronic subdural hematoma. So, you'd better to replace them by the figures presenting chronic subdural hematoma. As you know CSDH has a lower density than the brain parenchyma.

* In the end; I think your title has a problem. You do not compare closed drainage system technique and irrigation technique. As understood from the text, both of your techniques include closed drainage systems. So, you only aim to determine whether irrigation works for
the patient. That's why you conclude that 'Irrigation had no improvement in the long-term curative effect on CSDH, but it increased the risk of short-term complications'

* You state that you believe that the irrigation procedure might increase the risk of bridge vein bleeding, in turn increasing the probability of postoperative rebleeding. I think you don't have enough to state such an assertive claim. It is better to say; irrigation might have increased the risk of rebleeding. Going beyond has no proof.

* You state that both techniques are equivalent in long-term outcomes (recurrence, epilepsy, infection) in discussion but, when come to conclusion you say 'BHD is a safe and effective treatment in terms of long-term efficacy compared with BHD!' Great mistake!!!!!!

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Unable to assess

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No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
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Not relevant to this manuscript

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