

Dear Editors and Reviewers:

On behalf of my co-authors, we thank you very much for giving us an opportunity to revise our manuscript, we appreciate you and reviewers very much for the positive and constructive comments and suggestions on our manuscript entitled “**Clinical management of dural defects a review**”. (Manuscript NO: 82824).

We have studied comments carefully and have made correction which we hope meet with approval. The responds to the reviewer's comments are as flowing:

Responds to the reviewer's comments:

Reviewer #1:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: The topic of the paper – the management of dural defects – is of utmost importance since the beginnings of neurosurgery. Therefore I highly appreciate the paper dealing with this problem. However – the first sentence of the Abstract is definitively incorrect - Dural defects are common in spinal and neurosurgery – should be e.g. Dural defects are common in spinal and cranial neurosurgery. Anyway the authors have provided the results of the latest research progress on dural repair methods and materials together with the characteristics and efficacy of these dural substitutes. The Introduction is well written and provides some interesting facts about the anatomy of brain envelopes. However the sentence In a meta-analysis of 23 studies, the incidence of dural injury was 5.8%[1]. In my opinion requires specification that the incidence is related to spinal surgery. Also the term dura mater encephalin is to the best knowledge of the reviewer absolutely unusual (better cranial dura mater). In the text there are some more sentencies, verbal connections or words that require at least reconsideration. However the structure of the paper is adequate. The key subchapters describes adequately the principal techniques for dural repair – suture, biomaterials – grafts, protein based adhesives and bacterial cellulose membrane, non biological materials, composite materials and other repair methods. These subchapters are followed by the concluding subchapter Systematic evaluation of dural repair technology and Conclusions. The extent of References is outstanding (96) and confirms the amount of meticulous work the authors have devoted to this paper of excellent educational value not only for neurosurgical residents. Finally I can gladly recommend the paper for publication after solving the problems of some unusual verbal connections and sentencies.

Response: Thank you very much for your valuable comments. We have made correction according to the Reviewer's comments.

1. The first sentence of the Abstract is definitively incorrect - Dural defects are common in spinal and neurosurgery – should be e.g. Dural defects are common in spinal and cranial

neurosurgery

Thank you very much for your advice, your vision is very sharp, helped us to find this problem, Dural defects are common in spinal and cranial neurosurgery. We have made changes to the abstract of the article.

2. However the sentence In a meta-analysis of 23 studies, the incidence of dural injury was 5.8%[1]. In my opinion requires specification that the incidence is related to spinal surgery. Also the term dura mater encephalin is to the best knowledge of the reviewer absolutely unusual (better cranial dura mater)

Thank you for your suggestion. In fact, the literature cited in this sentence (meta analysis of 23 studies) indicates that the incidence of dural injury associated with spinal surgery is 5.8%. We have revised this inappropriate sentence.

Reviewer #2:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: Dear editor and authors, Dong et al. performed a narrative review on the pearls and pitfalls of durotomies and dural defects. The text accurately reflects the present advancements and knowledge. This is generally a well written and interesting review and should be accepted with revisions. Quality of English is generally good although some minor grammatical mistakes are noted. The tables are very nice and complete. This covers a breadth of techniques that is accessible to a wide audience, in a subject area that surgeons are facing in a daily manner. In perspective, the information provides good detail and might considerably help to shape the patient's personalized assessment of therapeutic responses. All relevant previous work was captured and cited appropriately. It indeed gives a truly balanced view of the field. It is somewhat limited by an unfocused content that does not make it clear exactly why many of these techniques would be desirable in the clinical management of dural defects and in what conditions would the exact procedure be chosen.

Response: Thank you very much for your valuable comments. We have made correction according to the Reviewer's comments.

1. It is somewhat limited by an unfocused content that does not make it clear exactly why many of these techniques would be desirable in the clinical management of dural defects and in what conditions would the exact procedure be chosen.

Thank you for your advice. We have added a section to describe the overall treatment strategy for dural defects. In fact, due to the update of dural repair technology and materials, as well as different doctors' operation preferences, it is impossible to clearly point out the indications of each dural repair material. The dural repair materials do not replace each other, and they can be used alone or in combination according to the demand. The clinical choice of dural repair materials depends on the specific operation. But to be sure, primary suture is essential for all types of dural injury and partial dural injury repair, and primary suture plus patch repair is recommended. If the damage is

too large to be repaired directly, indirect repair should be considered (We elaborate on it in the conclusion of the article.). Finally, although it is not clear what dural repair technology should be selected, we summarize the advantages and disadvantages of each dural repair technology as much as possible in the form of Table 2.

Additionally, this is our proof of polish.

