

Peer Review File

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Reviewer A

Comment 1: Please clarify if an artificial dural substitute was used in every case as opposed to only cases with CSF leaks? If so, why? Is this standard practice at your institution?

Reply 1: The artificial dural substitute was used in every case in the present study and it is the standard practice in our surgery team. As mentioned in the article “Low Complication Rate of Sellar Reconstruction by Artificial Dura Mater During Endoscopic Endonasal Transsphenoidal Surgery. *Medicine (Baltimore)*. 2017 Dec;96(52):e9422”, the use of an artificial dura mater patch has some advantages as it provides type I collagen scaffold that allows the growth of fibroblasts and derivation of novel dura mater to the defect site. It also has excellent histocompatibility and biodegradability, and will not increase the occurrence of infection. Therefore, we included the artificial dural substitute into our standard practice even for patients with grade 0 and grade 1 CSF leaks.

Changes in the text: We did not change the manuscript for now according to this comment.

Comment 2: Was the POD 1 and the 3, 6, and 12 months CT scans done just for this study, or are they standard of care at your institution and in your practice. If so, why? Please explain.

Reply 2: The POD 1 and the 3,6, and 12 months routine radiological examinations are standard of care in our practice. This follow-up strategy was made based on “Expert consensus on surgical treatment of pituitary adenoma in China” published on *National Medical Journal of China*, 2015 (DOI: 10.3760/cma.j.issn.0376-2491.2015.05.003).

Changes in the text: We did not change the manuscript for now regarding this comment.

Comment 3: The authors state that they prefer a rigid reconstruction of the sellar defect, yet they fail to state what their routine reconstruction methods/material was prior to the introduction of this current plate?

Reply 3: Thank you for your helpful comment. It is an important addition to this article.

Changes in the text: We have modified our text as advised (see Page 6, section “Surgical procedure and repair protocol”).

Comment 4: There is no comparison group in this study - it would be good to have a comparison group even if it was only a historical one.

Reply 4: We appreciate the comment and completely agree that it would be better to have a comparison group in the present study. Although the conclusion drawn by a retrospective study without a comparison group was not that strong and detailed, the present study makes an important contribution to the field by summarizing their clinical characteristics, radiologic features, and the efficacy and safety of skull base reconstruction using this bioresorbable mini-plate as compared to the previous publication (Ref 7). Additionally, the similar methods of endoscopic skull base repair using other currently available bioresorbable implants, including Resorb-X, MacroSorb, polydioxanone flexible plates, and LactoSorb (Ref 5,11,17,18) were also described by studies with one single treatment group. We sincerely hope this reply meets your requirements, but we would be grateful for any further guidance on this paper.

Changes in the text: We did not change the manuscript for now regarding this comment.

Comment 5: There were no high-pressure leaks to see if this plate performed well in a difficult situation.

Reply 5: Yes, the present protocol of skull base repair wasn't utilized in cases with high-pressure leaks. The objective of this study was to describe the technique of sellar repair using a bioresorbable plate as a rigid buttress and mainly evaluate its safety in patients undergoing endoscopic pituitary surgery. As a newly introduced technique, we prefer to using it on cases that are relatively easy to control. However, we would like to advocate it to cases with high-pressure leaks when the technique was proven safe

and efficacious.

Changes in the text: We did not change the manuscript for now regarding this comment.

Comment 6: Why was the same repair and plate used in cases where there was no leak?

Reply 6: Skull base repair using a rigid material can efficiently support packing materials in the sellar cavity, especially in cases with a bone defect of the sellar floor or an empty sella preoperatively; a comorbidity including hypertension, pneumonia, or T2DM; or high BMI. Functional pituitary adenomas such as Cushing's disease and acromegaly are frequently accompanied by increased intracranial pressure; therefore, an empty sella may develop without the rigid buttress after surgery. As such, we used the same repair and plate in cases where there was no leak.

Changes in the text: We did not change the manuscript for now regarding this comment.

Comment 7: Have the authors considered utilizing the patients own septal bone/cartilage as reconstructive material? It is cheaper, does not react with surrounding tissue and works extremely well in most cases.

Reply 7: Yes, we have considered utilizing the patient's own septal bone/cartilage as reconstructive material. They have no risk of foreign body reaction and no adjunctive cost. However, the variability and irregularity of bone fragments as well as the difficulty in shaping limited their application. Besides, the option of nasal septum vomer was not available in cases given the prior history of transsphenoidal surgery. Therefore, this technique may not be suitable as the standard practice.

Changes in the text: We did not change the manuscript for now regarding this comment.

Reviewer B

Comment: The article's main concern is the safety of the bioabsorbable implant. As a consequence, it will be important for the reader to know if patients were given antibiotics during or after the procedure.

Reply: Thank you for your helpful comment. It is an important addition to this article.

Changes in the text: We have modified our text as advised (see Page 6, section “Surgical procedure and repair protocol”).