Reply to reviewer comments;

Dear editor,
Thank you very much for reviewing this article. You have put forward valuable suggestions, and I have revised and explained them one by one. The following is the content of the reply.

Xuejian Wang

Comments to reviewer:
1, The abstract concluded the approach “has a lower incidence of cerebrospinal fluid leakage” and “lower complications”. However there is no comparison group in this study, and the author should not make conclusions without supporting data.

Answer: Thank you very much for your question. Neurosurgeons all know that the current high incidence of cerebrospinal fluid complications after nasal endoscopy has always been a cause of perplexing this surgical method. In the discussion part, I have cited literature to show that the best therapeutic effect reported by this surgical method at present is about 5% of the incidence of cerebrospinal fluid leakage(line 177), and the incidence of cerebrospinal fluid leakage in our treatment group is 8.3%, so we believe that this surgical approach “has a lower incidence of cerebrospinal fluid leakage” and “lower complications”.

2, The author stated in the Introduction that “a number of studies have pointed out that these skull base reconstruction techniques have insufficient support and cannot achieve a good skull base support function.”, So, if the purpose of this study is to provide evidence in support of this technique, more clinical results is necessary.

Answer: Thank you very much for your question. At present, reconstruction techniques are used for this surgical method after operation, but different doctors adopt different reconstruction methods and different reconstruction concepts, so the incidence of cerebrospinal fluid is different, and the proposed method is also a common one. The previous understanding of the failure of reconstruction mainly believes that there are reasons such as displacement in the previous reconstruction methods, and we just borrow this expression, not as the research point of whether there is deviation in our article.

3, It is not clear when the author’s team modified the surgery technique, was there a prior publication by the author’s team? If the modification of the technique is an important part of this study, the author should introduce it earlier, i.e. in the Introduction and the abstract

Answer: Thank you very much for your question. At present, for the reconstruction of skull base after nasal neuroendoscopy, few people have reported using in-situ bone flap or pedicled mucosal
flap. In this group of patients, we have adopted the surgical method of in-situ bone flap combined with pedicled mucosal flap, and the reconstruction method is not complicated, but the effect is good.

4. A few different variations were used throughout the manuscript to refer to the same technique. The way the author described the surgical technique should be kept more consistent to avoid confusion.

Answer: Thank you very much for your question. I have revised and unified the relevant technical expressions.

5. “There were 2 patients who did not use a pedicled nasal septum mucosa flap”. Please explain further, why these two patients did not receive the same approach.

Answer: Thank you very much for your question. I have added the reasons in the article. There were 2 patients who did not use a pedicled nasal septum mucosa flap, due to the failure to make a suitable mucosal flap during the operation in one, and the other case failed to obtain a mucosal flap due to preoperative nasal surgery.

6. The author should clearly explain the differences and similarities in the surgical procedure, if any.

Answer: Thank you very much for your question. At present, there are many surgical methods reported, even in situ bone flap has also been mentioned, so for this reconstruction method is different from others, it is not clear, this is only one of the reconstruction methods, our personal experience.

7, Figure 1 was an illustration of the methodology of making in situ bone flaps and reconstructive surgery. Because the author stated that several studies also attempted similar surgical approaches, therefore, it is not clear which part of the procedure is novel for this study, and which part was the same as that has been used previously. For example, what was the difference between this study and the procedure performed in the study by Zhou Y, et al., Clinical Efficacy of the Multilayered Skull Base Reconstruction Using In Situ Bone Flap in Endoscopic Endonasal Approach for Craniopharyngioma. J Neurol Surg B Skull Base. 2021 May 31;83(Suppl 2):e291-e297. doi: 10.1055/s-0041-1726128.

Answer: Thank you very much for your question. Reconstruction after neuroendoscopic surgery has always been a difficult problem for neurosurgeons. Many people have proposed many ways of rebuilding, different from person to person. Each reconstruction method may have more or less
similarities or similarities, so it is difficult to say which method is necessarily better. I read carefully this paper: Zhou Y, et al., Clinical Efficacy of the Multilayered Skull Base Reconstruction Using In Situ Bone Flap in Endoscopic Endonasal Approach for Craniopharyngioma. J Neurol Surg B Skull Base. 2021 May 31;83(Suppl 2):e291-e297. doi: 10.1055/s-0041-1726128. They used a multi-layer reconstruction, and Fascia lata was also taken as the reconstruction material. In addition, our in-situ bone flap is attached to down side of bone window, and we can just bend it to the bottom wall of the sphenoid sinus. For the mucous flap, they removed the middle turbinate, but we kept it. So there are still a lot of differences.

8. Too brief. Is this a case series? Or observational study? Either way, patient demographics should be provided.

Answer: Thank you very much for your question. I have added patient demographics to the results section of the article.

9. A proper result section is lacking in the manuscript. It is not enough to simply restate what was already provided in the Abstract. The results should be explained in more detail in the main text with supporting data.

Answer: Thank you very much for your question. I have added some content, made some improvements.

10. Demographics and detailed clinical data were not provided. Were there demographic differences between patients with high-flow CSF leakage and low-flow CSF leakage?

Answer: Thank you very much for your question. Due to the differences in the number of enrolled patients and the types of diseases, the number and proportion of high-flow and low-flow cerebrospinal fluid cases reported in each article were biased, so the current comparison could not reflect population differences. For this group of patients, we did not discuss the difference between the probability of intraoperative cerebrospinal fluid leakage and other articles.

11. How many days of bed rest do patients need? How long was the hospitalization? How many were followed for 24 months?

Answer: Thank you very much for your question. I have added some content, made some improvements.

12. Please describe what is a ‘satisfactory’ reconstruction outcome, e.g. position of the flap, no bone absorption, etc… The methods section wrote “Head CT scan was performed postoperative
day to determine the surgical area. Follow-up examination was performed 3 months, 6 months, once a year later.” However, no postoperative image results were provided.

Answer: Thank you very much for your question. For our satisfactory reconstruction results, there was no cerebrospinal fluid rhinorrhea, no need for secondary surgical repair, and no need for lumbar cisterna drainage. For the patient, we conducted postoperative follow-up, which mainly examined CT and intermittent magnetic resonance examination. However, we did not specifically ask the imaging department to provide the changes of saddle bottom bone, nor did we specifically reconstruct the saddle bottom image, so we did not provide it.

13, In the discussion section, the author mentioned “our team further studied the concept... proposed and improved the "in situ bone flap technology”, designed the bone flap of sellar floor, and made the in situ bone flap with a small grinding head under neuroendoscopy”. Should there be citations added to support this statement? It is not clear when the author’s team modified the surgery technique. If the modification of the technique is an important part of this study, the author should introduce it earlier, i.e. in the Introduction and the abstract

Answer: Thank you very much for your question. At present, there are many surgical methods reported, even in situ bone flap has also been mentioned, so for this reconstruction method is different from others, it is not clear, this is only one of the reconstruction methods, our personal experience. In addition, our in-situ bone flap is attached to down side of bone window, and we can just bend it to the bottom wall of the sphenoid sinus. For the mucous flap, they removed the middle turbinate, but we kept it. So there are still a lot of differences.

14, The conclusion should be supported by data from this study only. There is no evidence in support of the claim that this approach “has a lower incidence of cerebrospinal fluid leakage and lower complications”

Answer: Thank you very much for your question. Neurosurgeons all know that the current high incidence of cerebrospinal fluid complications after nasal endoscopy has always been a cause of perplexing this surgical method. In the discussion part, I have cited literature to show that the best therapeutic effect reported by this surgical method at present is about 5% of the incidence of cerebrospinal fluid leakage, and the incidence of cerebrospinal fluid leakage in our treatment group is 8.3%, so we believe that this surgical approach “has a lower incidence of cerebrospinal fluid leakage” and “lower complications”.