Peer Review File

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Reviewer A

When performing laparoscopic duodenoduodenostomy in the management of annular pancreas in pediatrics, which of the Diamond-shape ver side-to-side anastomotic technique is superior?

Major comments

1. Patient data should be presented as median.

Reply: Thank you for this comment. Yes, we presented the patient data as median to show the baseline data better.

Changes in the text: The last paragragh in the method section, the first and second paragragh in the result section and Table 1.

2. Why is there a 60% fetal diagnosis but a much later age at surgery?

Reply: Thank you for this comment. After we presented our data as median, you can see the median time at surgery was 3 days after birth. In our hospital, surgery will be performed soon after the diagnosis is suspected.

Changes in the text: None.

3. 21 trisomy was omitted, but since it is included in the table, it is not clear what cases were omitted, which could be considered a bias. We can clarify the presence of bias by stating all cases of duodenal atresia that were operated on during this period and then stating what was omitted from this study.

Reply: Thank you for this comment. In our case series, we excluded the cases with other gastrointestinal anomalies because the presence of these anomalies would surely affect the choice and results of surgery. The cases with 21 trisomy had more risk in comorbidities especially gastrointestinal anomalies and as a result, cases with 21 trisomy were more likely to be excluded. To better stating all the cases we added a flow diagram as shown in figure 1. Additionally, the distribution of 21 trisomy in DS and STS group does not show statistical significance, meaning that our exclusion would not lead to a bias in case of 21 trisomy.

Changes in the text: Figure 1 and the caption.

4. You mention that DS or STS is a surgeon's preference, but does this mean that one surgeon prefers one method over the other? Or does it mean that one surgeon prefers one method or the other, or does he change the method according to his own judgment on the operation? Either way, there seems to be quite a bit of bias, but is there anything that could counteract that bias? Is there anything that you can do to counteract the bias?

Reply: Thank you for this comment. All the surgery were performed by the team of our pediatric department. As we discussed in the discussion part, the decision was made by the surgeon according to the anatomy of surgical site, the diameter of the duodenum and surgeon's experience. During the surgery, our team would discuss together and the final decision would be made by the chief surgeon (Also the correspondence author Dr. Zeng) to counteract the bias. However, as in a retrospective study, the bias caused by surgical decision seems to be unavoidable. Your comment also reminds us that our expression here is ambiguous and we rewrote the sentence to make us better understood. Thank you.

Changes in the text: The first paragragh in the methods section.

5. You should add a brief description of the surgical method.

Reply: Thank you for this advice. But we didn't add a brief description in our study mainly for these two technique already being popular and standard in treating duodenal obstruction for decades. It's accepted by most of the pediatric surgeons and widely described in previous literature. We still think it unnecessary to repeat these techniques again. And we have quoted two literature in our study.

Changes in the text: None.

6. In the methods section, please include a clear definition of full oral feeding, how to determine when to start oral feeding after surgery, and how to increase the amount of milk. Please also provide a definition of feeding intolerance and how to determine when oral feeding can be initiated.

Reply: Thank you for this comment. We described the definitions in the methods section.

Changes in the text: The third paragragh in the methods section.

Reviewer B

This is a very interesting paper based on a large cohort of patients with a quite uncommon condition. I think that authors ought to try to explain the reasons why a type of anastomosis is preferred to the other and try to provide a scientific explanation aside from surgical preference.

Reply: Thank you for this comment. As we discussed in the discussion part, the decision was made by the surgeon according to the anatomy of surgical site, the diameter of the duodenum and surgeon's experience. During the surgery, our team would discuss together and the final decision

would be made by the chief surgeon (Also the correspondence author Dr. Zeng). Your comment also reminds us that our expression here is ambiguous and we rewrote the sentence to make us better understood. Thank you.

Changes in the text: The first paragragh in the methods section.

Reviewer C

The manuscript is nicely written and the topic is very interesting.

However, some information is missing or is not given clearly enough.

Firstly, why are patients which underwent conversion to open surgery excluded from the study? It would be nice to add this patient to the study if possible and to provide a reason for conversion.

Reply: Thank you for this comment. We think it would be nice to add these patients to the study. However, after we reviewed the data, no conversion to open surgery was found. So we deleted the exclusion criteria here but didn't add any data in our study.

Changes in the text: The first paragragh of exclusion criteria in the methods section.

Secondly, in line 157 it is stated that: Feeding intolerance was revealed in 6 (11.5%) of DS group and 2 (3.8%) of STS group and there158 were no significant difference. But 6/44 of DS group is 13.63% and 2/8 of STS group is 25% , so you should calculate and compare percentages in the groups not in total.

Reply: Thank you for this comment. We recalculated the percentages in each group istead of total. Of course, it didn't affect the statistical analysis between the two groups.

Changes in the text: Table 3 and the last paragraph in result section.

Another thing that remains unclear to me is in which group/patient trans-anastomotic tube was used and what were the criteria for placing the trans-anastomotic tube or not.

Reply: Thank you for this comment. We described the criteria for placing the trans-anastomotic tube in the methods section.

Changes in the text: The third paragragh in the methods section.

Also, the size of the instruments used for both types of surgery should be given.

Reply: Thank you for this comment. All of the surgeries were performed by the same set of instruments and we described it in our study.

Changes in the text: The first paragragh in the methods section.

Reviewer D

1. Annular pancreas basically means the ring of pancreatic tissue encircling the duodenum may itself cause an extrinsic partial obstruction, however, a duodenal atresia or stenotic web underlies the annulus and is the actual cause of blockage. In the context of your paper, it seems that you are emphasizing the annular pancreas as the actual cause of the obstruction and do not mention to intrinsic duodenal obstruction. By clarifying this relationship, can you provide a more accurate understanding of the condition and its underlying mechanisms. (Line 74)

Reply: Thank you for this comment. Annular pancreas originates from failed or abnormal migration/rotation of ventral pancreatic bud and causes extrinsic obstruction. A duodenal atresia or stenotic web is the abnormal development of the bowel and causes intrinsic obstruction. They are two different diseases with different etiology and require different types of surgerires. In fact, in our study, a duodenal atresia or stenotic web is an exclusion criteria as it may affect the result. We tried to make us more clear in the section you mentioned. Thank you!

Changes in the text: The first paragragh in the introduction section.

2. In a retrospective study, the characteristic data (Table 1) typically presents the p-value to compare whether the baseline characteristics of the two groups differ significantly. For example, if the average age of the two groups differ significantly, it indicates a statistically significant difference. When calculating the outcome table, such as surgical time or time to start feeding, the age variable should be included in the regression analysis to control for its effect in the equation in order to achieve fairness and impartiality. (Table 1)

Reply: Thank you for this comment. Yes, we re-analyse our data and rewrote the related part in our paper.

Changes in the text: Table 1, Table 2, result section and the fourth paragraph in the discussion section.

3. The data of age, bleeding volume and time of initial oral feeding, if the coefficient of variation is large, indicating that standard deviation is greater than the mean, it is recommended to present the median and interquartile range (IQR) along with the data. This approach is useful in situations where the mean and standard deviation may not accurately represent the central tendency and dispersion of the data to its skewed nature. (Line 125, 138, 150)

Reply: Thank you for this comment. Yes, we presented the patient data as median to show the baseline data better.

Changes in the text: The last paragragh in the method section, the first and second paragragh in the result section and Table1.

4. Based on the information you provided, there seems to be a contradiction between the high percentage of cases prenatally suspected to be intestinal obstruction that required early surgical treatment and the delayed mean age at surgery. It should be considered potential explanation. (Line 125, 128)

Reply: Thank you for this comment. After we presented our data as median, you can see the median time at surgery was 3 days after birth. In our hospital, surgery will be performed soon after the diagnosis is suspected.

Changes in the text: None.

5. In terms of severe complication, when would you diagnose anastomotic stenosis? (Line 141)

Reply: Thank you for this comment. During follow-up, patients with complication-related symptoms such as vomiting would be considered for further evaluations such as abdominal plain X-ray, ultrasonic examination or upper gastrointestinal contrast to exclude the complications, likely anastomotic stenosis. Those cases without symptoms were considered free of stenosis. Our follow-up period was at least 19 months. Of course, long term follow-up is needed for our patients. We made some complement explanation in the method section. Thank you!

Changes in the text: The second paragragh in the method section.

6. Please correct the table number regarding the table you mentioned of post operative complication data in the Result part. (Line 143, 149)

Reply: Thank you for this comment. Yes, we corrected this mistake in our article. Thank you!

Changes in the text: The first and second paragragh in the result section.

7. The data in Table 3 appears to be somewhat confusing and the percentages calculated seem to be incorrect. (Table 3)

Reply: Thank you for this comment. Yes, we corrected this mistake in our article. Thank you!

Changes in the text: Table 3

8. As 36 patients were inserted trans-anastomotic tube, but only 11 cases had gotten early enteral nutrition. It should be considered potential explanation. (Line 163)

Reply: Thank you for this comment. We made some complement explanation in the method section.

Changes in the text: The third paragragh in the method section.

9. Based on your statement, it seems that you are discussing the choice of surgical techniques for anastomosis in cases where the distal duodenum is relatively small for transverse incision. The size of distal duodenum for transverse incision is not a determine factor in choosing between

diamond shape or side-to-side anastomosis technique, as the distal duodenum typically requires a longitudinal incision regardless of its size. (Line 227)

Reply: Thank you for this comment. Our opinion is similar to your opinion in the comment. Maybe we failed to express ourselives well, making the authers confusing. We changed the word “incision” into “stoma” to make us clear. Thank you!

Changes in the text: The fourth paragragh in the discussion section.

10. Please re-analyze the significant difference of time of initial oral feeding. (Line 244)

Reply: Thank you for this comment. Yes, we re-analyze the significant difference of time of initial oral feeding and rewrote the sections of this result.

Changes in the text: The second paragragh in the result section and table 1.