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Science Editor, Editorial Office, World Journal of Gastroenterology
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Re-Submission of the revised manuscript "Outcomes of patients with complete versus incomplete congenital duodenal obstruction undergoing operative repair "

Manuscript No: 47915

Dear Prof. Jia-Ping Yan,

herewith we wish to submit the revised manuscript "Outcomes of patients with complete versus incomplete congenital duodenal obstruction undergoing operative repair" for consideration for publication in the World Journal of Gastroenterology.

We thank for the valuable comments and questions of the reviewers.

We wish to answer all questions and comments raised point-by-point in this letter.

The changes have also been marked in the revised manuscript.

Reviewer #1:

SPECIFIC COMMENTS TO AUTHORS

Good work. Congratulations.

Thank you for your favorable comment.

Reviewer #2:

SPECIFIC COMMENTS TO AUTHORS

Authors reported a retrospective review of patients who underwent operative repair of CCDO or ICDO in his tertiary care institution during 13 years. The demographics, clinical presentation, preoperative diagnostics and postoperative outcomes of 50 patients were compared between CCDO (N=27; atresia type 1-3, annular pancreas) and ICDO (N=23; annular pancreas, web, Ladd's bands). STATUS: ACCETTABLE FOR PUBLICATION PENDING MINOR REVISIONS General considerations: This is an original article. The work is interesting and the paper is very well-written. Abstract: the abstract appropriately summarize the manuscript without discrepancies between the abstract and the remainder of the manuscript. Keywords: adequate. Tables: The tables are well made and summarized. Reference: adequate.

Thank you very much for your favorable assessment.

Paper On some aspects, the authors should address:

1) In the Materials and methods paragraph, your “preoperative diagnostics were plain abdominal X-ray, upper gastrointestinal contrast study and gastroduodenoscopy”. Have you considered to use ultrasound as well? If you didn't use it, why?

Thank you for your interesting question. Above cited statement from the Material and methods section reflects the standard diagnostic means that were implemented for indication of repair of congenital duodenal obstruction (CDO). I agree Ultrasound for the diagnosis of hypertrophic pylorus stenosis (HPS) is a standard diagnostic means.

However, ultrasonographic diagnosis of CDO based on a postnatal ultrasound is disproportionately more difficult and yet not standard practice. In our experience there are several reasons for that: 1) In HPS the liver is used as a window for the ultrasonographic visualization of the pylorus. Because CDO is located further caudally the liver cannot sufficiently be used as a window. 2) The colon crosses the duodenum ventrally; gas contents in the colon frequently do not enable ultrasonographic visualization of the duodenum. 3) CDO is frequently accompanied by chronic distension of the pylorus; distension of the pylorus makes an ultrasonographic visualization of the pylorus extremely difficult; on the other hand the pylorus -as an anatomic landmark- is helpful for the localisation of the CDO. 4) In case of an ultrasonographic detection of a congenital duodenal stenosis the examiner may have difficulties to state the functional relevance of the finding (is it an incidental finding without relevance or is it an obstructive lesion?); in comparison a contrast study is able to accurately document the passage of the contrast medium over time.

Again, I thank you for the comment. I agree with you, that any time it is worthwhile to consider a radiation-free diagnostic means. However, in our opinion we lack data that allow the conclusion that you can indicate an operative CDO repair solely on the basis of

ultrasonographic diagnostics. Furthermore, in cases of congenital duodenal stenoses where symptoms persist postoperatively, or in those cases where one needs to demonstrate the surgical success of a CDO repair it could be helpful to have a preoperative contrast study of the duodenum.

However, according to your valuable remarks we have clarified the section you cited by inserting additional information in the manuscript. "...to indicate operative repair..."

(revised manuscript page 5, line 25)

2) If you can, discuss the role of ultrasound in the diagnosis of duodenal stenosis and hypertrophic pyloric stenosis. Please do it considering the following articles: -Costa Dias S, Swinson S, Torrão H, Gonçalves L, Kurochka S, Vaz CP, Mendes V. Hypertrophic pyloric stenosis: tips and tricks for ultrasound diagnosis. *Insights Imaging*. 2012 Jun;3(3):247-50. doi: 10.1007/s13244-012-0168-x. Epub 2012 May 1. -Brinkley MF, Tracy ET, Maxfield CM. Congenital duodenal obstruction: causes and imaging approach. *Pediatr Radiol*. 2016 Jul;46(8):1084-95. doi: 10.1007/s00247-016-3603-1. Epub 2016 Jun 20.

Thank you very much for your comment and the literature. In our center ultrasound is used as a diagnostic means for prenatal diagnosis of CDO. Any postnatal suspicion of CDO obtains verification by plain abdominal x-ray or upper gastrointestinal contrast study.

Literature 1: Costa Dias S, Swinson S, Torrão H, Gonçalves L, Kurochka S, Vaz CP, Mendes V. Hypertrophic pyloric stenosis: tips and tricks for ultrasound diagnosis. *Insights Imaging*. 2012 Jun;3(3):247-50. doi: 10.1007/s13244-012-0168-x. Epub 2012 May 1.

Please allow me to refer to my remarks above (see 1)

Literature 2: Brinkley MF, Tracy ET, Maxfield CM. Congenital duodenal obstruction: causes and imaging approach. *Pediatr Radiol*. 2016 Jul;46(8):1084-95. doi: 10.1007/s00247-016-3603-1. Epub 2016 Jun 20.

Citation from this publication: "Postnatally, US has shown utility in confirming extrinsic etiologies of congenital duodenal obstruction, including annular pancreas, duplication cyst and preduodenal portal vein".

Duplication cyst and preduodenal portal vein are rare causes of CDO and were not found in our cohort. Annular pancreas: in our center, the detection of an annular pancreas would request verification by a plain abdominal x-ray or contrast study before operative repair is planned.

3) In the text, I think it would be useful a brief discussion also about the etiology of duodenal stenosis or obstruction in the adult. In this setting, you must discuss and cite the following works: -Jayaraman MV, Mayo-Smith WW, Movson JS, Dupuy DE, Wallach MT. CT of the duodenum: an overlooked segment gets its due. *Radiographics*. 2001 Oct;21 Spec No:S147-60. -Campanile F, Maurea S, Mainenti P, Corvino A, Imbriaco M. Duodenal involvement by breast cancer. *Breast J*. 2012 Nov-Dec;18(6):615-6. doi: 10.1111/tbj.12034. Epub 2012 Oct 30. -Juanpere S, Valls L, Serra I, Osorio M, Gelabert A, Maroto A, Pedraza S. Imaging of non-neoplastic duodenal diseases. A pictorial review with emphasis on MDCT. *Insights Imaging*. 2018 Apr;9(2):121-135. doi: 10.1007/s13244-018-0593-6. Epub 2018 Jan 31.

Thank you for your comment and suggestions. In line with your recommendation we have inserted a passage, that reflects your remarks. "This is equally attributable both to

undiagnosed congenital lesions and the wide spectrum of acquired lesions of the adults`
duodenum^[19,20,21]."

(revised manuscript page 10, line 25-27 and page 14, line 30 - page 15, line 8)

4)I have not found figures of imaging. If they are not there, you could add them.

Thank you for your valuable comment. Figures of imaging are now included in the manuscript.

"**Figure 1** Radiographic imaging of complete (CCDO) and incomplete congenital duodenal obstruction (ICDO). A: CCDO; the plain abdominal x-ray of a newborn infant with duodenal atresia type 1 displays a characteristic double bubble sign; B: ICDO; contrast study of a 2 month old infant with * duodenal web"

(revised manuscript page 4, line 22 and pages 16 - 17)

Reviewer #3:

SPECIFIC COMMENTS TO AUTHORS

Comment to the Authors To the corresponding author thank you for submitting your manuscript entitled "Outcomes of patients with complete versus incomplete congenital duodenal obstruction undergoing operative repair". It is a well written report of a case control study for the operative management of complete and incomplete congenital duodenal obstruction. I think your paper is suitable for publication.

Thank you very much for your favorable comment.

We hope, that we were able to respond appropriately to the reviewers` comments and questions.

Sincerely,

Udo Rolle, Professor