

ANSWERING REVIEWERS



March 22, 2014

Dear Editor,

Please find enclosed the edited manuscript in Word format (file name: 9668-review.doc).

Title: The Coagulopathy in A Subtype of Choledochal Cyst and Management Strategy

Author: Mei Diao, Long Li, Wei Cheng

Name of Journal: *World Journal of Gastroenterology*

ESPS Manuscript NO: 9668

The manuscript has been improved according to the suggestions of reviewers:

1 Format has been updated

2 Revision has been made according to the suggestions of the reviewer

(1) For manuscripts submitted by non-native speakers of English, please provided language certificate by professional English language editing companies mentioned in 'The Revision Policies of BPG for Brief Article'.

Response: Prof Wei CHENG, professor of Department of Paediatrics and Department of Surgery, Faculty of Medicine, Monash University, Australia, is an Australian. He contributed to the manuscript revision.

(2) Please clarify the "Columns" of your manuscript according to the "ESPS-Columns scope note".

Response: We clarified that the current study is a prospective study.

(3) Author contributions:

Response: We revised the author contributions as required:

Prof. Long LI and Prof Wei CHENG designed the study and revised the manuscript; Dr Mei DIAO contributed designed the study, collected and analyzed the clinical data, wrote and revised the manuscript.

(4) Correspondence to:

Response: We inserted detailed address of corresponding authors as followings:

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(5) Core tips: Please write a summary of less than 100 words to outline the most innovative and important arguments and core contents in your paper to attract readers.

Response: We inserted Core tips into text:

Children suffering from choledochal cysts with coagulopathy have increased operative risks. We assessed the coagulation profiles in children with different subtypes of choledochal cyst, and established a management strategy whereby patients either underwent medical optimization or laparoscopic external drainage before definitive laparoscopic operation. The results suggest that treatment protocol allows safe one-stage definitive operation for the majority of choledochal cyst children with coagulopathy, and maximizes the opportunity of definitive operation.

(6) Please provide all authors abbreviation names and manuscript title here. The abbreviation names should be the same as the copyright.

Response: We inserted all authors' abbreviation names and manuscript title accordingly.

Diao M, Li L, Cheng W. The Coagulopathy in A Subtype of Choledochal Cyst and Management Strategy.

(7) Please write the COMMENTS section:

Response: We inserted COMMENTS section as following:

Background

Choledochal cysts (CDC) children with coagulopathies secondary to liver dysfunctions have high risks to undergo definitive laparoscopic surgeries. We herewith established a management logarithm whereby patients either underwent medical optimization or laparoscopic external drainage before definitive laparoscopic surgery, and evaluated its safety and efficacy.

Research frontiers

Conventionally, open external biliary drainage and delayed definitive operation is adopted for CDC children with coagulopathies. The disadvantages include 1) two-stage operation; 2) external drainage decompresses the biliary pressure but does not resolve the distal CBD obstruction, which leads to excessive bile drainage and subsequent dehydration and electrolyte imbalance; 3) missing the opportunity of minimal invasive surgery. The current study is the first attempt to assess the coagulation profiles of the children with different subtypes of CDC, established a protocol for safe surgical correction of CDC for those children with coagulopathy, and standardizes the surgical management of CDC with coagulopathy

Innovations and breakthroughs

Acquired fibrinogen (FIB) deficiency develops when there is severe liver parenchyma damage and impaired synthesis. FIB level of at least 1 g/L is generally required for safe elective surgery. We herewith used FIB level as an indicator of adequate liver function before operating on CDC children with coagulopathies. Patients with FIB levels between 1-2 g/L underwent one-stage definitive laparoscopic surgeries; the remaining patients with FIB < 1g/L underwent 3 days of medical treatment. Thereafter, those with FIB ≥ 1g/L underwent one-stage definitive laparoscopic surgeries whereas those with FIB < 1g/L underwent laparoscopic external biliary drainages to allow liver function improvement. These patients with liver function improvements then underwent definitive

laparoscopic surgeries after 7 days drainages. After preoperative optimization, the majority (92.5%) of CDC children with coagulopathy underwent successful one-stage definitive surgery. The remaining 7.5% CDC children underwent definitive surgery after 7 days external bile drainage. The mean operative time and postoperative recovery were comparable to those with normal coagulations. No blood transfusion or other postoperative complications were encountered.

Applications

Our protocol offers a safe and effective treatment algorithm to manage CDC children with coagulopathy. The advantages of the treatment protocol are 1) being able to apply safe one-stage definitive operation for majority of CDC children; 2) to reduce the external biliary drainage which is conventionally used in CDC with severe coagulopathy; and 3) to maximize the opportunity of definitive operation and minimal invasive surgery.

Terminology

FIB value < 1 g/L reflects FIB depletion, indicating a risk of spontaneous bleeding. Our outcomes suggest that FIB level can be used to monitor the liver function improvement. FIB value ≥ 1 g/L may be an indicator that CDC children with coagulopathy can undergo definitive operation.

Peer review

Children suffering from choledochal cysts with coagulopathy have increased operative risks. The current study assessed the coagulation profiles in different subtypes of choledochal cyst, introduced a new concept of using fibrinogen as an indicator and established a management strategy whereby patients either underwent medical optimization or laparoscopic external drainage before definitive laparoscopic operation. The results of larger number of patients suggest that treatment protocol allows safe one-stage definitive operation for the majority of choledochal cyst children with coagulopathy, and maximizes the opportunity of definitive operation.

(8) Please add PubMed citation numbers and DOI citation to the reference list and list all authors. Please revise throughout. The author should provide the first page of the paper without PMID and DOI. For those references that have not been indexed by PubMed, a printed copy of the first page of the full reference should be submitted.

Response: We inserted PubMed citation numbers and DOI citation to the reference list, list all authors, and provided the first page of the paper without PMID and DOI.

3 References and typesetting were corrected

Thank you again for publishing our manuscript in the *World Journal of Gastroenterology*.

Sincerely yours,

Long Li

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