PEER-REVIEW REPORT

Name of journal: World Journal of Gastrointestinal Surgery

Manuscript NO: 77187

Title: Identifying survival protective factors for chronic dialysis patients with surgically confirmed acute mesenteric ischemia

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer’s code: 05251800

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer’s Country/Territory: Norway

Author’s Country/Territory: Taiwan

Manuscript submission date: 2022-04-19

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-04-19 15:16

Reviewer performed review: 2022-04-27 17:07

Review time: 8 Days and 1 Hour

Scientific quality

- Grade A: Excellent
- Grade B: Very good
- Grade C: Good
- Grade D: Fair
- Grade E: Do not publish

Language quality

- Grade A: Priority publishing
- Grade B: Minor language polishing
- Grade C: A great deal of language polishing
- Grade D: Rejection

Conclusion

- Accept (High priority)
- Accept (General priority)
- Minor revision
- Major revision
- Rejection

Re-review

- Yes
- No
SPECIFIC COMMENTS TO AUTHORS
Liau, S.K. and the co-authors have in this retrospective study, investigated the factors associated with the survival of chronic dialysis patients treated surgically for acute mesenteric ischemia. It is an interesting and valuable study performed on a group of patients with critical systemic disease of well-known high mortality. The authors have identified chronic dialysis patients with acute mesenteric ischemia identified/diagnosed with laparotomy. They have evaluated the patients’ demographics and comorbidities as a whole study population as well as compared the study patients based on the survival or non-survival. They have employed uni- and multi-variate analysis in the Cox proportional hazards models to analyse the significance of different factors on the in-hospital survival of the patients. The result of this study shows 46.6% in-hospital mortality. They have found surgical delay <4.5 days as a cut-off associated with better survival in a univariate analysis. Besides no shock, higher potassium level on hospital admission, no colon resection, and total bowel resection length <110 cm favouring survival. After 1 week of hospitalization, lower WBCs, lower Neutrophils, higher lymphocytes and lower CRP was associated with survival. Multivariate analysis higher potassium at admission, lower neutrophils 1 week after admission, no colon resection, and total bowel resection <110 cm were significantly associated with survival. It is a well written manuscript and also well structured with appropriate headings. The methods are clear and with acceptable statistical analysis. Results are also in accordance with the aims of the study and the predefined methods. Limitations of the study as the authors themselves mentioned in the discussion section is the retrospective design of the study as well as the small number of patients in the groups to show significant difference for
certain variables of interest. One important limitation is the lack of information about the treatment of acute mesenteric ischemia, i.e., revascularization procedures before or after the intestinal resection. This information is of immense importance to understand the survival or non-survival of the patients in the study.

Point wise comments and suggestion to the abstract and the manuscript is as follows: Criteria Checklist for peer-review

1 Title. Does the title reflect the main subject/hypothesis of the manuscript? Yes

2 Abstract. Does the abstract summarize and reflect the work described in the manuscript? Yes

3 Key words. Do the key words reflect the focus of the manuscript? Yes

4 Background. Does the manuscript adequately describe the background, present status and significance of the study? Yes

5 Methods. Does the manuscript describe methods (e.g., experiments, data analysis, surveys, and clinical trials, etc.) in adequate detail? Yes. However, the information about the how the cut off of 4.5 days delay for surgery was determined has to be mentioned in the methods section.

6 Results. Are the research objectives achieved by the experiments used in this study? What are the contributions that the study has made for research progress in this field? Yes, this study increases our knowledge about the development of a extremely lethal diagnosis of acute mesenteric ischemia in patients with chronic dialysis. We do not have enough publications about acute mesenteric ischemia in this population.

7 Discussion. Does the manuscript interpret the findings adequately and appropriately, highlighting the key points concisely, clearly and logically? Are the findings and their applicability/relevance to the literature stated in a clear and definite manner? Is the discussion accurate and does it discuss the paper’s scientific significance and/or relevance to clinical practice sufficiently? Yes

8 Illustrations and tables. Are the figures, diagrams and tables sufficient, good quality and appropriately illustrative of the paper contents? Do figures require labeling with arrows, asterisks etc., better legends? Figures and the tables are appropriate and self-explanatory.

9 Biostatistics. Does the manuscript meet the
requirements of biostatistics? Yes  

10 Units. Does the manuscript meet the requirements of use of SI units? Yes  

11 References. Does the manuscript cite appropriately the latest, important and authoritative references in the introduction and discussion sections? Does the author self-cite, omit, incorrectly cite and/or over-cite references? Mostly  

12 Quality of manuscript organization and presentation. Is the manuscript well, concisely and coherently organized and presented? Is the style, language and grammar accurate and appropriate? Well written manuscript with understandable language and grammar.  

13 Research methods and reporting. Authors should have prepared their manuscripts according to manuscript type and the appropriate categories, as follows: (1) CARE Checklist (2013) - Case report; (2) CONSORT 2010 Statement - Clinical Trials study, Prospective study, Randomized Controlled trial, Randomized Clinical trial; (3) PRISMA 2009 Checklist - Evidence-Based Medicine, Systematic review, Meta-Analysis; (4) STROBE Statement - Case Control study, Observational study, Retrospective Cohort study; and (5) The ARRIVE Guidelines - Basic study. Did the author prepare the manuscript according to the appropriate research methods and reporting? The authors have mentioned in the manuscript that it is a retrospective study.  

14 Ethics statements. For all manuscripts involving human studies and/or animal experiments, author(s) must submit the related formal ethics documents that were reviewed and approved by their local ethical review committee. Did the manuscript meet the requirements of ethics? Yes
**Name of journal:** World Journal of Gastrointestinal Surgery  
**Manuscript NO:** 77187  
**Title:** Identifying survival protective factors for chronic dialysis patients with surgically confirmed acute mesenteric ischemia  
**Provenance and peer review:** Unsolicited Manuscript; Externally peer reviewed  
**Peer-review model:** Single blind  
**Reviewer’s code:** 00186221  
**Position:** Peer Reviewer  
**Academic degree:** MD, PhD  
**Professional title:** Doctor, Surgeon  
**Reviewer’s Country/Territory:** Italy  
**Author’s Country/Territory:** Taiwan  
**Manuscript submission date:** 2022-04-19  
**Reviewer chosen by:** AI Technique  
**Reviewer accepted review:** 2022-05-19 08:06  
**Reviewer performed review:** 2022-06-01 07:06  
**Review time:** 12 Days and 23 Hours

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SPECIFIC COMMENTS TO AUTHORS
An interesting and well-done study showing that surgery delay, no shock, no resection of the colon, total bowel resection length <110 cm, and lower neutrophil levels after 1 week of treatment predicted better outcomes in chronic dialysis patients with mesenteric ischemia. I think the conclusions of the study are of a remarkable interest for the scientific community.
Name of journal: World Journal of Gastrointestinal Surgery

Manuscript NO: 77187

Title: Identifying survival protective factors for chronic dialysis patients with surgically confirmed acute mesenteric ischemia

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer’s code: 05820329

Position: Peer Reviewer

Academic degree: PhD

Professional title: Assistant Professor

Reviewer’s Country/Territory: India

Author’s Country/Territory: Taiwan

Manuscript submission date: 2022-04-19

Reviewer chosen by: Dong-Mei Wang

Reviewer accepted review: 2022-05-26 07:16

Reviewer performed review: 2022-06-02 09:53

Review time: 7 Days and 2 Hours

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| Re-review | [Y] Yes | [ ] No |
SPECIFIC COMMENTS TO AUTHORS
The authors presented a report on Identifying survival protective factors for chronic dialysis patients. The paper is well formulated, and is novel and provides insights into mesenteric ischemia associated with ESKD. However, there are minor changes identified, the author is requested to modify the script accordingly. 1) Authors with different affiliations should be properly identified. 2) There are repeated sentences, which are sounding awkward (We retrospectively evaluated 103 chronic dialysis patients who were surgically confirmed to have acute mesenteric ischemia in a tertiary medical center over a 14-year period.) this repeated a lot. It is better to use sample 1 and sample 2. 3) Second, since surgical risk is higher in chronic dialysis patients than in nondialysis patients, most physicians prefer aggressive medical treatment first, which may prolong the time of surgery delay.) what do you mean by aggressive in this. 4) Shock status, what does it mean by shock, what is its status. 5) Unclear explanation about the figures 1, 2, 3. The legend should be more informative. 6) The mortality rate in the patients with Heart failure, Atrial fibrillation, Hypertension, Chronic obstructive pulmonary disease is very high, what could be the reason? (In table 1) 7) Why female patients mortality rate is high ? (In table 1) 8) why peritoneal dialysis is killing more patients ? (In table 1) 9) The table 2 needs more explanation about the governing factors. 10) Conclusions can be more elaborate Overall the paper excellent and the work is appreciable.