Author’s response to reviews

Title: Risk factors and outcomes of urosepsis in patients with calculous pyonephrosis receiving surgical intervention: a single-center retrospective study

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Version: 2 Date: 18 Feb 2019

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Point-by-Point Response to the reviewers’ comments

Ref. Ms. ID: MS # BANE-D-18-00528R1

Journal: BMC Anesthesiology

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Authors: Xia Liang, et al.

Dear Prof. Scarlatescu,

We appreciate you and the reviewers very much for your kind remarks and comments, these comments are valuable and very helpful for revising and improving our manuscript. We have addressed the comments raised by the reviewers, and the amendments are highlighted in red in
the revised manuscript. We have tried our best to revise our manuscript according to the comments. We would like to express our great appreciation to you and reviewers for comments on our manuscript again. Our point-to-point responses to the reviewers’ comments are as follows:

Editor Comments:

Thank you for sending the revised version of the article. The manuscript is much improved, however there are still some suggestions that you could address in order to make the manuscript suitable for publication. Please review the calculations in Table 1 as suggested by Reviewer 2. There are some differences between the text (where a total number of patients included is 287) and the content of Table 1 (where a different number of patients included -total and with urosepsis- is reported). Please also mention the complete details regarding the statistical software used.

Response: Many thanks to you for giving us an opportunity to revise our manuscript again. We have viewed the reports and made corresponding corrections and explanations regarding differences between the text and the Table 1 as well as details of statistical software in the revised version. Thank you very much.

Reviewer comments:

Chin-Chen Chu, M.D., Ph.D. (Reviewer #2):

Most of previous comments have been satisfactorily dealt with in this revision. However, some concerns still remain.

1. Abstract: low blood pressure (LBP) could be replaced with "hypotension", it is not necessary to use 3 words and abbreviation for hypotension.

Response: Thanks for your excellent suggestion. As you suggested, we replaced the expression of “low blood pressure (LBP)” with “hypotension” in the revised version to make the manuscript more concise (Page 2, paragraph 3, line 3 and line 5).

2. Flow diagram: first column: I think it is a mistake statement of "total number of patients admitted to urology department under the diagnosis of urolithiasis and received surgery".

Response: We apologized that we have made a mistake in the statement as you suggested. Therefore, we deleted the expression which may cause confusion in the first column of Figure 1.
3. Many errors exist in Table 1.

A. Table 1, first column. Total number of patients 205? Urosepsis 24? Non-urosepsis 181?

Response: We really apologized for the apparent error in Table 1, first column because we have forgotten to modify these figures after recounting. Thank you very much for pointing out our mistakes and we have already made the corresponding amendment.

B. Table 1. 9th column. Smoking 53 (19.6%), it means the total number of patients is 270.

Response: First, we appreciate you very much for your comments. It is reasonable for you to raise this problem. In fact, the total number of patients is 271 in the column of “Smoking” because there were 16 patients in the non-urosepsis group whose information of smoking history of was missing in their medical record. Moreover, we did not think it has a significant influence on our statistical result. Therefore, to make the content of this table more accurate, we added a corresponding note in the footnote.

C. Table 1. ASA I-II: 144, and ASA III:141. It demonstrates that total patients are 285, not 287.

Response: This problem is similar to the previous one. We checked the data again and the total number of patients is 285 in the column of “ASA classification” because there was one patient in the urosepsis group as well as another one patient in the non-urosepsis group whose information of ASA classification of was missing. Also, we added a note in the footnote.

We really appreciate the Dr. Chu’s important comments and suggestions on the manuscript. In fact, the way we process data referred to previous studies[1, 2]. Thanks to your suggestions, we checked our data over and over again and found another error in Table 1, fourth column (Rural 187(65.2%)), which we made a correction. We felt apologetic very much about it because we mistook the total number of all patients, rather than non-urosepsis patients for denominator in our calculations. After repeated checks, we can guarantee the accuracy of our data in the revised version. Thank you again.
Aldo Espinosa (Reviewer #3):

1. This is an interesting retrospective study trying to investigate risk factors and outcomes of urosepsis during and after surgery for calculous pyonephrosis. I am concerned about the number of patients that ended up being included in the study, I think a larger study group would increase the statistical power, although I also understand that authors might be limited in this aspect.

Response: Thank you very much for your understanding in the aspect, and if possible, we will carry on further research which includes a larger sample size in the future.

2. My other concern is the controversial development of urosepsis during anesthesia and surgery, although this has been explained further in your manuscript, the readers will probably still have reason to doubt this. This on its own is a whole new subject of study since there are too many factors that can interfere from surgical and anesthetic perspectives. I think it might be too bold to accept this as certainty of development of sepsis during surgery, without more data to back up the affirmation.

Response: We appreciate your kind comments very much. It is really reasonable for you and many readers probably to question the new definition of urosepsis during anesthesia and surgery. To our knowledge, previous studies, no matter prospective or retrospective studies, mostly focused on postoperative sepsis. It is not difficult to understand that one of reasons is that compared with intraoperative condition, there are not so many factors to interfere the diagnosis after surgery. Before our research began, we did take it into consideration. While according to our clinical experience, intraoperative sepsis does exist, no matter urosepsis or enterogenous sepsis. Through the research, 12 (12/41) patients were identified as intraoperative urosepsis based on our criteria, we still thought it was not a small proportion although our criteria are not absolutely perfect and the result should be interpreted prudently. Therefore, to fill the void in the concept of intraoperative urosepsis, we raised our ideas about it, which might be too bold to accept for many readers. While from our perspective, we hope intraoperative sepsis will not be overlooked in the future and there will be more and more research to improve the concept. Conservatively, we discussed it as one of limitations of this study in the discussion part of the revised version (Page 15, paragraph 2, line 6-7). Thank you for your valuable comments again.

3. Page 6, in the criteria described to diagnose Intraoperative urosepsis it is mentioned that the hemodynamic changes were cold be treated with Dantrolene. Could you explain further on how many patients received this treatment, or in how many was Malignant hyperthermia actually suspected?
Response: In fact, none of the patients were suspected Malignant hyperthermia (MH) in this study and no one received Dantrolene treatment. To our knowledge, MH is a rare, yet life-threatening disorder triggered by exposure to inhalational anesthetics and succinylcholine, which usually manifests as tachycardia, body temperature elevation, rise in EtCO2 despite increased minute ventilation, accompanied by muscle rigidity. It was reported a very low incidence, ranging from 1:10000 to 1:250000[3] with depending on the geographic region, age, gender, and race [4-7]. In China Mainland, so far, no large studies have reported the incidence of MH and only 55 cases were reported as MH during the year 1974-2008[8], although the incidence has been undoubtedly underestimated. During the period of this retrospective study, we have not find sufficient evidence to diagnose MH from medical record. The reason why we made it one of the criteria was that we hoped to consider all possibilities as far as possible before our research began. Special thanks to you for your valuable comments again.

Again, we appreciate the reviewers greatly for their kind comments and valuable suggestions on this manuscript.

References:


