

Peer Review File

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Reviewer A

Comment 1: line 95: "so these patients are randomly performed MHARLN or ON." what do you want to say by randomly performed? it is not clear i would suggest not use the term randomly which is not appropriate especially in the method part

Reply 1: Many thanks for this constructive suggestion. We are sorry for the inappropriate use of "randomly" in the method part, and have modified the relevant sentence, with no expression of "randomly".

Change in the text: we have modified our text as advised (see Page 5, line 78-81).

Comment 2: Line 97-100: Can the authors explain the reason of emergency nephrectomy when infections was present? drainage and antibiotics are the usual treatments. There is huge difference between a chronic kidney failure and an infected kidney in terms of inflammation. the authors should had stratify by indications their results.

Reply 2: Many thanks for this constructive suggestion, and we are sorry for the inappropriate expression which led to confusion. We did not perform nephrectomy in the acute inflammatory phase, and we performed nephrectomy after unsatisfactory treatments of one stage drainage of percutaneous nephrostomy or anti-inflammatory therapy in some pyonephrosis patients. We are very sorry for our incorrect writing.

Change in the text: we have modified our text as advised (see Page 5-6, line 81-84).

Comment 3: intraoperative hemodynamics are not of interest for the aim of this study in my opinion. The authors should remove these data and maybe just make a mention in the results.

Reply 3: Thank you for reminding, the reviewer is right that intraoperative hemodynamics dates are not necessary in our article. We have removed these data in table 4 and just briefly mentioned it in the results.

Change in the text: we have modified our text as advised (see Page 7, line 120-121).

Comment 4: the complications should have been reported using Clavien Dindo score and also giving some information about minor and major complications.

Reply 4: We agree with the reviewer that it is a good idea to classify the postoperative complications according to Clavien-Dindo's grading system. And We have modified Table 6 in the results section according to the Clavien-Dindo's grading classification method.

Change in the text: we have modified our text as advised (see in table 6; see Page 8, line136-137).

Comment 5: volume of postoperative drainage as well as length of incision are not relevant when comparing these 2 approaches which are completely different.

Reply 5: Thank you for reminding. We agree with the reviewer that the volume of postoperative drainage as well as length of incision are not relevant when comparing these two completely different technics. We abolished the irrelevant part in manuscript and removed these data in table5.

Change in the text: we have modified our text as advised (see table 5 and see Page 8, line 129).

Comment 6: Operative technics are not of importance in this manuscript and should be only mentioned and refer to a supplementary element with the description of the complete technique.

Reply 6: Thank you for reminding. We have put the operative technic part into the supplementary file 1 according to the Reviewer' s comments.

Change in the text: we have modified our text as advised (see Page 6, line 90-92; see supplementary file 1).

Comment 7: The real comparator should be pure Laparoscopic retroperitoneal compared to hand assisted. The authors should explain the rational to compare these technics.

Reply 7: Thanks a lot for your helpful comment. We are sorry that we did not explained well in the previous version of manuscript the difficulties to conduct pure laparoscopic nephrectomy for this heavily inflamed kidney. For the information, we chose to compare open nephrectomy surgery with modified hand assisted surgery because previously for this proportion of patients (comprehensively evaluated by the surgeons), laparoscopic surgery was not possible due to assumed heavy perirenal adhesion. The aim that we developed this modified hand assisted technic was to achieve shorter incision and average hospital stay than open nephrectomy surgery. Hence, we chose to compare open nephrectomy surgery with modified hand assisted surgery in our article.

So we made further explanations and modified the part in the manuscript.

Change in the text: we have modified our text as advised (see Page 5, line 76-81).

Reviewer B

This manuscript is original article which indicates that comparison of modified hand-assisted retroperitoneoscopic laparoscopic nephrectomy (MHARLN) versus open nephrectomy (ON) in patients with benign inflammatory non-functioning kidney diseases, written by Xia et al. They concluded that MHARLN for benign inflammatory nonfunctioning kidney performed by skilled laparoscopic surgeon is repeatable and safe. This article contains some interesting details. Although the manuscript is well written, I have several comments for the authors

- **Comment 1:** The authors should show the inflammatory data, such as WBC and CRP, in right before and after surgery.

Reply 1: Thanks a lot for your helpful comment, we very much agree with you that it is a good idea to collect the inflammatory data in right before and after surgery. According with the

reviewer's advice, we added inflammatory data about the preoperative white blood cell (WBC) count and neutrophil (NEU) rate, 1d-WBC count and 1d-NEU rate, WBC count and NEU rate before discharge in our manuscript. and it is interesting that the WBC count on the first day after surgery was significantly lower in MHARLN group than in the ON group. There were no significant differences in the preoperative WBC count and NEU rate, 1d-NEU rate, WBC count and NEU rate before discharge in the two group. This suggested that postoperative first day inflammation response in MHARLN group was less severe than that in ON group. And we are regretful that the other inflammatory date, such as CRP, PCT, ESR, was incomplete in most of the patients. Therefore, we did not conduct statistical analysis. These valuable comments also have important guiding significance to our further research prospect.

Change in the text: we have modified our text as advised (see Page 2, line 24, line 30-31; see Page 8, line 122-128; see Page 11, line 187-189 and see in table4.).

• **Comment 2:** The authors described that these patients are randomly performed MHARLN or ON. Because the number between MHARLN and ON is quite different (142 vs. 81), did you have some criteria to select these surgical methods?

Reply 2: Many thanks for your constructive suggestion. We are very sorry for the inappropriate expression which led to confusion. We are sorry for the inappropriate use of “randomly” in the method part, and have modified the relevant sentence, with no expression of “randomly”. We select the types of operations according to the following conditions: firstly, preoperative renal function assessment was performed in all patients before nephrectomy to confirm that the diseased side of the kidney met the resection criteria. Secondly, combine with the comprehensive evaluation by the surgeon and pure laparoscopy seems unlikely to accomplish this complex dissection task. Finally, it is advisable to balance the benefits and risks according to the individual characteristics of patients and to decide with patients by discussing the advantages and disadvantages of each procedure and then performed MHARLN or ON. We are very sorry for our incorrect writing.

Change in the text: we have modified our text as advised (see Page 5, line 74-81).

• **Comment 3:** In patient with pyelonephritis, why did you select surgical nephrectomy? The Inflammatory conditions were uncontrolled by treatment of ureteral stent or nephrostomy? In general, simple pyelonephritis was controlled by antibiotics therapy, ureteral stenting, or nephrostomy.

Reply 3: We are very sorry that we did not fully explain why we chose surgical nephrectomy over anti-inflammatory or ureteral stenting in pyelonephritis. For the information. The disease selected in this paper was benign inflammatory non-functioning kidney diseases, including pyelonephritis patients with poor renal function and no improvement under previous treatment with ureteral stents or nephrostomy. All patients were assessed for renal function prior to nephrectomy to confirm that they had poor renal function and had met the nephrectomy criteria, including the otherwise need of long-term draining and the patients' opinions. Therefore, for patients with renal loss from pyelonephritis with heavy inflammation, we performed nephrectomy after unsatisfactory treatment with antibiotics therapy, ureteral stenting, or nephrostomy.

Consequently, we have changed the term “pyelonephritis” to “Nonfunctional kidney with

pyelonephritis” in Table 1 and in the text.

Change in the text: we have modified our text as advised (see in table 1. and Page 5-6, line 81-84)

• **Comment 4:** In MHARLN, did the surgeons first tried to reach the hilum and expose it? If possible, authors showed how many patients which surgeon could not approach the hilum first to avoid direct manipulation of kidney. Because it is major advantage to approach directly the renal hilum in retroperitoneoscopic approach compared to that in open surgery.

Reply 4: Thanks a lot for your valuable advice. According to your advice, we carefully checked the surgical records of each patient. As this was a retrospective study, we found that the surgical records of some patients did not record in detail whether the renal hilum position could not be controlled first, and obvious bias may exist as consequence, which could not objectively reflect the real situation. Finally, we are regretful for the lack of results in this part, and in the revised manuscript we also discussed about this limitation in the discussion.

Change in the text: we have modified our text as advised (see Page 13, line 222-225)

• **Comment 5:** In describing the post-operative complications, classified by Clavien-Dindo’s grading system was recommended.

Reply 5: We agree with the reviewer that it is a good idea to classify the postoperative complications according to Clavien-Dindo's grading system. And we have modified Table 6 in the results section according to the Clavien-Dindo's grading classification method.

Change in the text: we have modified our text as advised (see in table 6; see Page 8, line136-137).