

Manuscript number: 48912

Title: "Overlay of a sponge soaked with ropivacaine and multipoint infiltration analgesia result in faster recovery after laparoscopic hepatectomy"

Correspondence Author: Bin Jin

Dear Editor:

Thank you very much for your attention and comments on our paper 48912. We have revised the manuscript according to your kind advices and reviewers' detailed suggestions. Enclosed please find the responses to the referees. We sincerely hope this manuscript will be finally acceptable to be published. If you have any question about this paper, please don't hesitate to let me know. Thank you very much for all your help and looking forward to hearing from you soon.

Best regards

Sincerely yours

Dr. Bin Jin

Please find the following Response to the comments of reviewers:

Response to the reviewers' comments

Response to Reviewer 1: (Reviewer's code: 02839880)

Thanks for your comments on our paper. We have revised our paper according to your comments:

1. We checked all the abbreviations and acronyms, and explained all the abbreviations of each figure/table.

2. Thanks for your suggestion about the layout of table 2 and 3. We found deficiencies in our paper, and we'll try to make the figures and tables more clear.

3. Considering the simplicity, safety and efficacy of multipoint local anesthesia and the sponge covering of the liver with ropivacaine after laparoscopic hepatectomy, this method is very worthy of application and promotion. In the future, the method could be applied to more areas such as gastrectomy and rectal resection with further study.

4. Heading for the reference section will be added.

Sincerely yours,

Dr. Bin Jin

Response to Reviewer 2: (Reviewer's code: 02489368)

Thanks for your comments on our paper. We have revised our paper according to your comments:

1. 1) Before the start of the study, random sequence (200 numbers, Fixed value 20170321) was generated with the function of Random Number Generators in Statistical Package for Social Sciences (SPSS)20.0 (SPSS Inc., Chicago, IL, United States). Finally, 146 patients were divided into two groups: Ropivacaine group (random number < 0.034, n=74), Control group (random number > 0.034, n=74).

2) For allocation concealment, Envelope Method was adopted.

3) JinHuan Yang generated the random allocation sequence and assigned participants to two

4) groups. Bin Jin enrolled participants.

2. The random sequence generation, allocation implementation and participants assignment

were in the charge of JinHuan Yang who didn't participate in the surgery, data collection and analysis. Patients and other researchers including surgeon, data gatherers and data analyzers didn't know the result of allocation. In the end of the surgery, the ropivacaine solution or normal saline for the two groups were prepared and provided by JinHuan Yang and an identical anesthetist.

3. Although it was retrospectively registered, the approval for ethical review, project planning paper and implement were all previous to the register. In planning paper, we estimate there will be about 100 patients. In the end, there were 146 patients were enrolled in the study, but we still upload the original planning paper when register.

4. 1) I described the statistical analysis in more detail. 2) We didn't performed normality test for continuous variables, but we are doing this test now in order to find the most appropriate concentration.

2) It's difficult to calculate the sample size, because there are several observational index. Finally, we calculate different size according to different index, we decided that 100-150 patients was appropriate. (α : 0.05, β : 0.2) 3) Thanks for your suggestion, we used the statistical analysis method of ANOVA and MANOVA after received your valuable advice and found the result is credible. 4) I added provide 95% confidence interval in tables.

Thanks for your suggestion, we found so many deficiencies in our study especially statistics.
Sincerely yours,
Dr. Bin Jin

Response to Reviewer 3: (Reviewer's code: 02552429)

Thanks for your comments on our paper. We have revised our paper according to your comments:

Thanks for your good evaluation and kind suggestion, I have explained all the abbreviations of each figure/table in the text.

If you have any question about this paper, please don't hesitate to let me know.

Sincerely yours,
Dr. Bin Jin