Author’s response to reviews

Title: Macroscopic changes during negative pressure wound therapy of the open abdomen using conventional negative pressure wound therapy and NPWT with a protective disc over the intestines

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Author’s response to reviews: see over
Dear Editor
We are pleased that you found our paper entitled “Macroscopic changes during negative pressure wound therapy of the open abdomen using conventional negative pressure wound therapy and NPWT with a protective disc over the intestines” interesting and will consider it suitable for publication in BMC Surgery.

We are very grateful to the reviewers for their suggestions, which we have found very constructive. We have carefully considered their comments and have tried to follow their advice and suggestions as closely as possible.

Sincerely

Sandra Lindstedt, MD, PhD

Respond to reviewers;

Review Thomas Wild;

Dear Dr Wild, thank you for reviewing this manuscript, we are very grateful for your suggestions, which we have found very constructive. We have carefully considered your comments and have tried to follow your advice and suggestions as closely as possible.

We have previously shown that NPWT of the open abdomen induce a decrease in microvascular blood flow in the intestinal loops close to the dressing and that a protective disc over the intestines restored the blood flow. Based on those data we believe that the reason for petechial bleeding is secondary to ischemia. The text added has been highlighted in the manuscript.

The topic on cardiac side effects in the discussion has been shortened.

The indications for NPWT in abdominal compartment syndrome and peritonitis have been further explained in the introduction due to your suggestions. The text added has been highlighted in the manuscript.

The study was carried out in healthy pigs sins no such study is performed earlier. To be able to refer further studies in an infected wound model, where a lot of complicating factors, as for example circulatory instability during septicemia, might inflict on the results, we started out
investigation an isolated situation without to any unsure inflicted factors. One can only presume that the intestines are more vulnerable an infected model.

The spelling mistake in the abstract is corrected

We agree that you should not cite submitted manuscript. The manuscript is now in press for Annals of Surgery. We have changed it to in press in the reference list. We hope that accepted manuscript in press in alright to cite, if not please let us know and we will change it.

**Reviewer Andreas Bruhin;**

Dear Dr Bruhin, thank you for reviewing this manuscript, we are very grateful for your suggestions, which we have found very constructive. We have carefully considered your comments and have tried to follow your advice and suggestions as closely as possible.

We agree that the microscopic findings would be of great interest, unfortunately we did not achieve any biopsies for analysis in this study but we will carry on investigating how NPWT of the open abdomen effects the intestines and other organs. It would be a very interesting study in the future.

Most probably different levels of NPWT induce different degrees of changes in microscopic, macroscopic and blood flow changes. In this study we choose -120 mmHg since it’s a pressure level that often is used clinically. Macroscopic changes are presumable less at for example a negative pressure of -75 mmHg. It might, however inflict on the draining effect if you choose a lower negative pressure. The text added has been highlighted in the manuscript.

**Biomed Central Editorial**

Some changes have been made due to your concerns, and they are as follows;

The study design was approved by the ethical committee on animal experiments in Region Skane, Sweden. The text added has been highlighted in the manuscript, part material and method.

Competing interests; the authors declare that they have no competing interests. The text added has been highlighted in the manuscript.

Authors' contributions; SL, RI & MM carried out the experimental studies. SL drafted the manuscript. JH & JH participated in the sequence alignment. SL, JH, RI participated in the design of the study and performed the statistical analysis. All authors read and approved the final manuscript. The text added has been highlighted in the manuscript.