# Peer Review File

## Reviewer comments

*There are numerous errors regarding the English writing and I would recommend proofreading by a native English speaker. This makes the manuscript hard to read.*

Reply: Thanks for your suggestion. We have tried our best to polish the language in the revised manuscript. Our article are proofread by native English speakers.

*Comment 1. Why where the following patients excluded? "(3) Patients who were transferred to the intensive care unit for more than 24 hours after surgery. (4) Patients who used an analgesia pump immediately after operation. (5) Patients who were subjected to postoperative traumatic operations, such as thoracic catheter placement. (6) Patients with early postoperative anastomotic leakage, pneumonia, or other serious complications." These are important postoperative outcomes and although rare, might be linked to the intervention. This need to be explained.*

Reply 1: (3) Long-term postoperative intensive care unit treatment may involve extensive use of analgesics and sedatives, which may affect VAS.

(4) Some patients require immediate application of analgesic pump after surgery, which affects VAS.

(5) Invasive procedures such as postoperative placement of a chest tube increase the source of pain and the use of analgesics, which can affect VAS.

(6) Early postoperative serious complications such as anastomotic leakage and pneumonia often require invasive operations, which increase the source of pain for patients and make the pain score inaccurate.

*Comment 2. Line 124 and 125: the difference between groups should be under results, not methods.*

Reply 2: We have modified our text as advised (see Page 7, line 181-183).

*Comment 3. The tables should be at separate pages, they are interrupted now, which makes them really hard to read. Some outcomes are rounded at 2 decimals, some at one decimal. This should be corrected.*

Reply 3: We have modified our text as advised.

*Comment 4. VAS is a number between 0-10, thus a continuous variable, not 0 or 1. After reading the methods section, it should be categorised in 1-3/4-6/7-10. This is not the*

*case in Table 2, where it is mentioned as 0 or 1. So the primary outcome does not make any sense to me. How was the statistical difference derived?*

Reply 4: The VAS in Table 2 was the score on the 30th day after surgery, with 0 representing 0 and 1 representing 1. The number of patients with a score of 2-10 was 0. In other words, the VAS score for all patients was 0-1. Although VAS was a continuous variable, the results were only 0 and 1, so we used the $\chi 2$ test for the analysis between the two groups.

*Comment 5. The major issue is there was no baseline VAS. I think the rate of analgesic pump use is the only valid outcome regarding postoperative pain. On the other hand, the choice for such pump might be arbitrary.*

Reply 5: As for the baseline VAS, the preoperative VAS score of both groups was 0. This study is a retrospective study, which is not as perfect as a prospective study. We can only analyze and make statistics in limited data as far as possible, which is the systematic error of all retrospective studies. Therefore, the choice of pump may not be very rigorous.

*Comment 6. The authors state they completed the STROBE checklist. Preferably such checklist should be included. Some items from this list seem to be missing. Potential sources of bias are not addressed and justification for the number of patients is not addressed.*

Reply 6: Our study mainly has the following limitations: 1) inherent bias of retrospective study; 2) patients have different pain tolerances; 3) patients differ in their sensitivity to painkillers. These may cause the VAS score to be not very accurate, which may affect the results. As for the number of patients in the study, we counted the patients who met the exclusion and inclusion criteria between February 2014 and August 2014.