



# Letter to the Editor: Pulmonary Recruitment Maneuver Reduces Shoulder Pain and Nausea After Laparoscopic Cholecystectomy: A Randomized Controlled Trial

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Dear Editor,

We write regarding the recent publication by Kihlstedt Pasquier & Anderson [1] that was recently discussed at CRAMSURG, an online journal club based in the UK ([www.cramsurg.org](http://www.cramsurg.org)). We found this study translatable into our daily clinical practice and conducted with a thorough methodology.

Throughout our discussion, a few themes and questions emerged that we would like to discuss.

The primary outcome of the study (mean pain intensity score at 48 h) was not different between the two groups. Statistically significant findings were identified for secondary outcomes such as shoulder pain and nausea and vomiting. Sample size calculations, however, were not conducted to detect such differences. We therefore believe that the conclusion of the paper should clarify that the findings should be considered exploratory.

A significant number of patients were excluded after randomisation—17 in the intervention group and 22 in the control group. This was mostly because they underwent ERCP, additional interventions or had a complication. Did the authors consider following such patients up and including their data in an intention to treat analysis? Given that all such events happened after randomisation, we feel this would depict a more pragmatic and real-life picture of the effectiveness of the intervention. This becomes even more important given the debate on the need for routine cholangiography [2].

Given the importance of ASA grade as an inclusion criteria, we want to ask the authors why a choice was made to exclude BMI from the variables contributing to it. Given the potential link between obesity, generalized inflammatory state and pain, we feel this would have been a relevant variable to include [3].

A further point for discussion is related to the choice of analgesics. We noticed that weak opioids were not routinely used for patients in this study. Given the widely recognised role of the WHO analgesic ladder in routine pain management, we were interested in the rationale for the analgesic choices employed in this study as this would significantly affect the external validity of the findings [4].

## References

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