Reviewer's report

Title: Transversus Abdominis Plane Block or Local Anesthetic Infiltration? A Meta-Analysis of Randomized Controlled Trials

Version: 3
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Reviewer: Nicholas Ventham

Reviewer's report:

Many thanks for submitting this meta-analysis. The review is largely well written (especially methods and results are very clear), and addresses the question. The statistics are logical, and well performed. The figures are clear and informative. I also think the bias assessment used is a robust methodology, although I would disagree on some of the scores given (especially those in the Cochrane bias plot). I sympathise with the authors of this study regarding contacting primary authors for information - this is difficult to do, and authors rarely get back to you.

I do however have some major methodological concerns, which may be difficult to address.

My major problem with this article is the inclusion of very different types of surgery. Although the authors do mention this (briefly) in the discussion, this is a highly confounding factor with this type of review. The trials include vastly different surgery types (the pain following lap chole is unlikely to be similar type or magnitude to pain following gyane surgery and inguinal hernia surgery) - no attempt has been made to address these differing types and routes of surgery (open/laparoscopic).

Similarly, another major issue is the type of TAP block/local anaesthetic agent used, and the INTRA-operative analgesics, and additional post-op analgesics (e.g. paracetamol, NSAIDs) are not sufficiently accounted for (difficult within the analysis, but should be discussed at least).

I am concerned by the (lack of) primary outcome. If VAS score was decided to be the primary outcome, (not clear in abstract, methods, results - I would suggest that 24 hour morphine consumption is more objective parameter to use) this is not a good choice, it is largely subjective, with high intra-subject variability. Also, as the authors briefly mention, the effect size is hard to appreciate - do the authors think that a 0.67 point reduction in VAS at 24 hours (given the varying types of operation included), with high intra-subject variability is sufficient to recommend one treatment modality over another. There are published 'VAS effect sizes' deemed to be clinically significant, which could be referenced.

Major compulsory revisions
The first paragraphs of the introduction and discussion are poor and should be re-written

Do all included papers publish their data in the form of mean and sd? if not how has this been incorporated into analyses, were studies excluded if data was not in this format.

Please include the funnel plots (I could not see this in the online/supp materials)

Are there any other relevant indices of recovery - time to mobilisation/diet resumption/discharge time (all difficult to analyse statistically) - that could have been analysed?

Were there any complications from either TAP block or local anaesthetic infiltration?

Minor issues
The use of 'handy' in the discussion is colloquial and should be changed (also seen in a different font)

Level of interest: An article of limited interest

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
No competing interests.