

4 Heard AMB, Green RJ, Eakins P. The formulation and introduction of a ‘can’t intubate, can’t ventilate’ algorithm into clinical practice. Anaesthesia 2009; 64: 601–8


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Single-dose intravenous paracetamol or propacetamol for prevention or treatment of postoperative pain

Editor—We read with interest the article ‘single-dose intravenous paracetamol or propacetamol for prevention or treatment of postoperative pain’1 and would like to highlight some concerns about the study.

In Figure 2, in the propacetamol vs placebo, and paracetamol vs placebo analyses, the authors have combined different procedures such as major vascular, orthopaedic, and dental surgery as part of their subgroup analysis. Postoperative pain and analgesic requirement after major vascular surgery such as abdominal aortic aneurysm repair would be different from that following orthopaedic and dental surgery. Hence, a separate subgroup analysis depending on the surgical specialties may have been more beneficial.

Secondly, due to the different types of surgery being included in this study, a random effect model rather than a fixed effect model may have been more useful, as results obtained from the latter model may be viewed as a ‘typical intervention effect’ from the included studies.2 In contrast, a random effect model involves an assumption that the estimated effects in the different studies are not identical but follow some distribution.2

Finally, the number of patients in the placebo groups3 4 have been duplicated between propacetamol and paracetamol subgroups, for both Moller and colleagues4 and Sinatra and colleagues5 studies creating a unit-of-analysis error. This could have been avoided by either splitting the shared group resulting in a smaller sample size and including two or more comparisons, by combining groups to create pairwise comparisons, or by undertaking a multiple treatment analysis.

Conflict of interest

None declared.

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4 Sinatra RS, Jahr JS, Reynolds LW, Viscusi ER, Groudine SB, Payen-Champenois C. Efficacy and safety of single and repeated administration of 1 gram intravenous acetaminophen injection (paracetamol) for pain management after major orthopedic surgery. Anesthesiology 2005; 102: 822–31
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Reply from the authors

Editor—We thank Dr Sahgal and colleagues for their interest and scrutiny of our manuscript1 and statistical approach, highlighting what is undoubtedly a complex analysis. Their reasoning is valid and we have been aware of these points, explored them, and had performed sensitivity analyses. We did not discuss these issues in detail in our manuscript, both for the sake of brevity and readability, and because they had little impact on our main findings. First, we referred to the heterogeneity of pain models in our discussion, both by listing it as a potential weakness of the review, and by performing a post hoc sensitivity analysis, where dental studies were removed. Although numbers needed to treat (NNTs) were lower in dental studies, they were similar to those derived from the more invasive surgery, and statistical significance was not affected. Our findings are in agreement with evidence that, despite expected differences in pain intensity and duration, analgesic response and derived NNTs are similar when comparing dental and other postsurgical models, and that it is legitimate to extrapolate efficacy from one pain context to another.2 There were insufficient data to perform a further subanalysis by surgical specialty.

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