Matching groups for studying postoperative nausea and vomiting: should we care?

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With great interest, we read the article by Ryu et al. [1] comparing the prophylactic efficacy of ondansetron and ramosetron for relieving PONV after laparoscopic cholecystectomy. The study added to the growing body of evidence that ramosetron is as effective as ondansetron for PONV prophylaxis.

First, we comment on the methodology of the study. In small studies, the potential for bias is high if care is not taken to control for all factors that influence the results and the hypothesis. The etiology of PONV is multifactorial and not completely explained. Multiple potential risk factors exist [2–4], but control should be used for well-known risk factors in all PONV studies. This control for risk factors should be done either by excluding the patients with the risk factors or by studying groups comparable in terms of the risk factors [5].

In this study, the simplified risk score was not reported. Moreover, nonsmoking status, as the well known risk factor, was not reported. We think that all PONV studies should report the simplified risk score [4] for all groups and exclude the patients with the potential risk factor as we did in our study examining the influence of nitrous oxide on PONV [6]. This would ensure that all the studied groups have the same baseline risk for PONV.

Second, the results of the study were presented as the ratio of the complete response (no PONV) rather than the percentage of PONV incidence. However, the authors failed to present the cumulative result for the entire 48 h period of the study, as recommended [5].

Third, the severity of nausea was recorded by a verbal rating scale (VRS) but not reported. At the same time, the VRS for pain was reported. Furthermore, the VRS for pain was used for rescue pain medication. Was the VRS for nausea used for the rescue PONV medication?

Finally, the authors stated that the role of nitrous oxide in increasing PONV is still debated. We disagree because ENIGMA [7], a large multicenter trial, showed that nitrous oxide increases the risk for PONV. Moreover, our pilot study [6] showed that nitrous oxide increases the incidence of PONV in a dose–response fashion.

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References