Reviewer's report

Title: Administration of palonosetron, granisetron, and ramosetron to prevent postoperative nausea and vomiting after laparoscopic gynecologic surgery: A prospective observational trial

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Reviewer: ashraf Habib

Reviewer's report:

General comments:

This is a study comparing the antiemetic efficacy of palonosetron, ramosetron and granisetron in women undergoing laparoscopic surgery and reporting no differences between the groups. There are numerous methodological issues that need to be clarified. The incidence of PONV reported is quite low compared to what is reported in the literature for this patient population receiving single agent prophylaxis. The methods suggest that the ward nurses collected the data, so there might be some element of underreporting. Presentation of the results also needs to be significantly improved.

Pages are not numbered and there are no line numbers.

Abstract:

Was the study blinded?

You mention in the background that the study evaluates PONV, but you only report on nausea, what were the results for vomiting?

What is the definition of “complete responders”?

Introduction:

What is meant by “increased hospitalizations”? Do you mean prolonged hospital stay?

Second paragraph, the end of this paragraph is truncated, there is something missing after “such as”

Third paragraph: you comment on ondansetron, ramosetron and palonosetron, you are however studying granisetron and not ondansetron.

What was your hypothesis?

Methods:

The paragraph under inclusion criteria, starting with “A total of 112” and ending with “anesthesia” belongs to the results section
Who prepared the study drug?

Was allocation concealed? If so, how?

What is the relevance of different PEEP levels according to their group? Do this sentence and the one after belong to this study or is this copied and pasted from another manuscript?

Did you give any analgesics for postoperative analgesia? Remifentanil does not provide any postoperative analgesia.

When were the data collected during the three assessment periods? Was it at the end of each period? Was this data collected by study nurses or by nurses providing clinical care of the patient?

Butorphanol is not an antiemetic.

What “other adverse effects” did you collect?

What assumptions did you make for your power calculation? Please state the complete response that you assumed in the three groups. Did you assume a 25% relative or absolute reduction in complete response? Did you account for multiple comparisons in your power calculation?

Results:

Presentation of the results needs to be significantly improved. You start by presenting the complete response rate at 24-48 hrs between the three groups; this is not the stated primary end point of the study and I am not sure why you chose to present this time point rather than the entire period of the study. You do not comment on the difference between the groups in the incidence of nausea (which is your stated primary end point), then you comment on vomiting over the entire period of the study. Presentation of the results needs to be consistent and clear.

You state that a “significantly greater number of subjects suffered vomiting….”; the table however does not suggest any statistically significant differences between the groups.

Please present the data for the entire study period (0-48 h) in the table.

You state that the need for rescue was “lower” in the ramosetron group; this implies statistical significance when this is not the case.

Some important information is missing such as intraoperative and postoperative analgesics given, duration of recovery room stay and severity of nausea.

Do you have data about smoking status? I know that you excluded patients with a history of PONV or motion sickness but non-smokers are at higher risk of PONV and this information needs to be presented.
Discussion:

First line: Please replace “PONVs” with “antiemetics”.

What previously developed 5HT3 antagonists do you mean? Ondansetron was the first selective 5HT3 receptor antagonist introduced on the market.

Reference 19, first author is Pal and not Swaika as you state in the discussion.

References 16, 17 and 21 refer to the fabricated studies by Fujii; those studies should not be cited.

Figure 1: what do you mean that patients were excluded because of incomplete medical records? Were those records used to abstract the data?

What do the p values in table 2 refer to? Why aren’t all the p-values reported?

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

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

Declaration of competing interests:

I declare that I have no competing interests