Reviewer’s report

Title: Effects of intraoperative high-dose versus low-dose remifentanil for postoperative epidural analgesia after gynecological abdominal surgery: A randomized clinical trial

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Reviewer: Lone Nikolajsen

Reviewer’s report:

The manuscript is well-written and easy to read. It deals with remifentanil induced opioid hyperalgesia – a topic of interest.

Thirty women were randomized to either low- or high-dose remifentanil after surgery (number reduced to 26 after drop outs).

My main concern is that the main outcome parameter is the postoperative consumption of epidural ropivacaine and fentanyl, not e.g. PCA morphine.

Also, the number of included patients is rather low although it is based on a power calculation.

Pain was assessed after 12, 24 and 48 hours, using the Prince Henry Pain Scale. I have not heard about that scale before. Who assessed the pain? Did the patients have a diary or was pain assessed by one of the authors.

There is no assessment of motor or sensory blockade.

The high-dose remifentanil group used 212 ml/h, the low-dose group used 181 ml/h. Baseline infusion was 4 ml/h = 192 ml/48 h. So the baseline infusion must have been decreased in several of the patients in the low-dose remifentanil group. And also, the low dose group cannot have used many bolus doses.

Was the infusion rate not adjusted until after 12 hours?

The question is whether this small difference (31 ml/48 hours) is of any clinical relevance.

Table 3: Pain intensity was very low in both groups.

Figure 2: Cumulative consumption is almost similar in the two groups in the first hours after surgery. One would expect high-dose remifentanil to have its largest hyperalgesic effect in the early postoperative phase.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:

I declare that I have no competing interests.