Reviewer’s report

Title: Continuous intravenous infusion of remifentanil improves the experience of parturient undergoing repeated cesarean section under epidural anesthesia, a prospective, randomized study

Version: 1 Date: 28 Sep 2019

Reviewer: Ohashi Yayoi

Reviewer's report:

Interesting article regarding the use of remifentanil to reduce the visceral pain at repeat elective cesarean section (CS) under epidural anesthesia alone.

My institution rarely gives an epidural anaesthesia alone for elective CS (except special high risk cases), uses spinal anesthesia or CSE. If the adequate dose for spinal anesthesia (with opioids) was used, we hardly experience visceral pain during the surgical period even on the repeat CS. However I understand that visceral pain can occur during CS under spinal alone as well as epidural anesthesia. Therefore this study has a content to read.

Firstly the weakness of this study was no blindness. I understand that you added "not designed to be a double-blinded study" for APGAR score in your discussion. A previous study with dexmedetomidine compared the dexmedetomidine effect with placebo (NS). In your study, it is hard to exclude the patients' perception (receiving IV pain killer/sedatives) and this bias should be discussed/stated in the manuscript.

If the analgesia is adequate for the procedure, it must difficult for patients to describe pain or discomfort. Was the VAS measured for sharp pain or did you include dull pain or any sorts of pain ?

The use of remifentanil in pregnancy is outside of the product licence/off label. Please state it in the manuscript.

P3 Background "epidural anesthesia "is not" (I would suggest you to change to "must not be") a pleasant experience."

P3 "remifentanil has almost no adverse neonatal or maternal effects" --- this statement is not true. You may or may not be aware that serious adverse effects (respiratory depression, bradycardia, cardiac arrest etc) with remifentanil (IVPCA for labour analgesia) to neonates and mothers/pregnant women have been reported in the past. Although you may want to argue the difference in remifentanil administration during between labour analgesia and CS, I still believe that its' worth emphasising the greater caution of using remifentanil as sedatives/anaesthetics in Obstetric anaesthesia.

P4 Method, Did you monitor the end tidal CO2 (EtCO2) during the remifentanil administration ? Severe respiratory depression with IV remifentanil has been reported and the use of EtCO2 monitoring is recommended. SpO2 cannot detect the early stage of respiratory depression. If EtCO2 was not used, please state the reason why.

Also you measured RR, how did you measure RR continuously ?
P5 How quickly did you allow to increase the remifentanil infusion rate?

P5 Please state more details (dose, bolus/continuous infusion, frequency) of Ketamine administration.

P5 What is "pressure mask"?

P7 Result, What is your consideration regarding the reason why the Ketamine administration did NOT differ between the two groups despite the VAS was significantly lower in Group R?

P8 Discussion, please site the references that you used for "In the current study, approximately 67.5% parturients experienced pain"--- if this (current study) means your this study, please state what the definition of "pain" was. Is it VAS more than 4?

P8 ".........which was an apparent increase compare with the rate in previous studies" -- please site the references for "previous studies".

P8 You quoted the reference 14 for the statement "even if the sensory block plane reaches T4, many maternal complaints remain regarding unpleasant feeling related to visceral traction". As far as I did read and understood the reference 14, there is no single statement of "visceral traction", rather the author stated that the intervention was required due to anxiety, loss of sensation etc. Please find a better reference which suits your statement.

Thanks for giving me this opportunity to review your manuscript. All the best on your submission.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:
Needs some language corrections before being published

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