Reviewer’s report

Title: Impedance cardiography as tool for continuous hemodynamic monitoring during cesarean section: randomized, prospective double blind study.

Version: 0 Date: 23 Dec 2017

Reviewer: Belgin Buyukakilli

Reviewer’s report:

REVIEWER’S COMMENTS:

1. The manuscript entitled "Impedance cardiography as tool for continuous hemodynamic monitoring during cesarean section: randomized, prospective double blind study?" by Antonella Cotoi et al. investigated the utility of ICG to evaluate the hemodynamic impact of 6 mg vs 8 mg levobupivacaine combined with fentanyl in healthy patients undergoing elective cesarean section; secondary, compared the duration and quality of analgesia and anesthesia. In result, this study demonstrates that ICG is a useful noninvasive tool to monitor continuously hemodynamics during cesarean section. Also, this study provides some evidence that the hemodynamic stability, the satisfying sensory block and rapid mobilization provided by low levobupivacaine dose may be particularly advantageous in obstetric patients.

2. This study is well organized. It is very easy to understand the language of article. The article has a fluent scientific language.

3. All the parts of figures and tables are descriptive and clear.

I will have some suggestions for authors:

1. Please, write that the BMP is the beats per minute.

2. Please, write that the BMI is the Body Mass Index.

3. SV can calculated using the formula previously described by Bernstein [1]:

$$SV = VEPT \times LVET \times ((dZ/dt)_{max} / Z_0),$$

where LVET (sec) is the left ventricular ejection time, dZ/dtmax (ohm/s) is the maximum rate of change in impedance, and Z0 (ohm) is the base impedance. VEPT (ml) is the volume of electrically participating tissue, and was calculated from L3/4.25 ratio, where L (cm) is the distance between the inner electrodes that measure the pulsatile changes in voltage [2]. Left ventricular ejection time (LVET) is determined as the duration of electromechanical systole. To determine the LVET, heart sounds are recorded with a physiological microphone (sound
transducer), and the interval between the first (S1) and the second (S2) heart sound is represented by LVET.

How did you calculate SV in this study? How did you record the LVET? More precisely, did you use LVET?

4. Please, add a sample record showing simultaneous recordings of impedance cardiography (ICG), electrocardiogram (ECG) and heart sounds from a pregnant woman involved in the study.

5. Stroke volume index (SVI) values are not given in Table 1. Please add the SVI data to the Table 1.

6. Throughout the text, Table 4 is not mentioned.

7. By which formula (m2) body surface area (BSA) is calculated?

REFERENCES


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.

Yes

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:

Acceptable

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