

Peer Review File

Article information: <http://dx.doi.org/10.21037/apm-21-598>

**Reviewer Comments**

General comments

**Comment 1:** This is an observational study without control group, neither any comparison with other monitoring system (control for systems), nor comparison for other anesthetic tool (control for anesthesia tools), attenuating its validity or academic values.

**Reply:** Thank you for your valuable comment. The PRAM system used in this study is based on mathematical analysis of the arterial pressure profile changes and allows the continuous recording hemodynamic parameters. It has been validated by several published reports also in comparison with pulmonary artery catheterization (PAC). However, PRAM system has not been used in cesarean section under spinal anesthesia. The purpose of our study is to discuss the potential benefit of using PRAM system to guide patient management of cesarean section. In this study, we used self-control comparison method. All the hemodynamic parameters were compared with baseline values and previous timepoints. The results can reflect the potential benefits of using PRAM system under spinal anesthesia for elective cesarean section.

**Changes in the text:** NA

**Comment 2:** Although the originality came from the patient group applied, the pregnant women receiving cesarean section under spinal anesthesia, the validity of data is still questionable in this observational study, such as the amount of intravenous replacement isotonic solutions as well as the vasopressors used to maintaining the blood pressure were not recorded which caused reviewer's great concern.

**Reply:** We are sorry that we have not provided the detailed data of the pregnant women receiving cesarean section under spinal anesthesia. In order to improve the validity of data, we supplemented relevant data in the manuscript.

**Changes in the text:** Table 2

**Comment 3:** The intravenous fluid was given during the procedure of spinal anesthesia, instead of preload for 1L isotonic solution, usually causes significant fluctuation of blood pressure peri-operatively for pregnant women receiving cesarean section which was not shown in the data.

**Reply:** Thank you for your valuable comment. PRAM reliability is related to the quality of the recorded arterial pressure signal. Patients with serious hypotension may cause inappropriate signal acquisition. Therefore, we maintain the parturients hemodynamics stability by 15° left lateral tilt, controlling sensory block level and vasopressors. As a result, we did not perform a measurement in parturients with severe post-spinal hypotension.

**Changes in the text:** NA

**Comment 4:** The methodology of quality control for the signal of monitoring parameters was not described in the study method.

**Reply:** Thanks to Reviewer for reminder, we added the methodology of quality control for the signal of monitoring parameters in the manuscript.

**Changes in the text:** Page 7, line 141-147

**Comment 5:** Basically, resistance X flow = pressure. Please be careful using “negatively correlate”, it should be “reversely correlate” when describing SVRI and SVI.

**Reply:** Thanks to Reviewer for reminder, we have modified our text as advised.

**Changes in the text:** Page 3, line 56; Page 11, line 218; Page 12, line 231; Page 14, line 283

#### Specific comments

**Comment 6:** How many patients were recruited?! Line 96 for 20; line 167-169, 20-3-2=17?; line 205=Table 1, N=32? This caused reviewer’s doubt for validity.

**Reply:** We are very sorry for our negligence of mistakenly writing the number of patients. We have corrected the number of patients in the manuscript.

**Changes in the text:** Table 1

**Comment 7:** In what position patient receiving spinal anesthesia? Line 120, each woman was placed in the full “left lateral decubitus” position with head down and knees bent; but in line 222, pregnant women received spinal-epidural anesthesia whilst lying in the “right-lateral position”? It’s confusing.

**Reply:** We are very sorry for our negligence of mistakenly writing the position patient receiving spinal anesthesia. We have corrected in the manuscript.

**Changes in the text:** Page 8, line 149

**Comment 8:** The dosage for the spinal anesthesia is not clearly documented. In line 222, patients were administered with 0.5% isobaric ropivacaine and the sensory block level---. According to line 126-127, it should be 12 mg, 0.5% isobaric ropivacaine.

**Reply:** Thanks to Reviewer for reminder, we have modified our text as advised.

**Changes in the text:** Page 13, line 268

**Comment 9:** The format in the reference section should be revised in line 316, 325-6.

**Reply:** Thanks to Reviewer for reminder, we have modified our text as advised.

**Changes in the text:** Page 18, line 370 › 380-383