Reviewer's report

Title: Agreement between transperineal ultrasound measurements and digital examinations of cervical dilatation during labor

Version: 2

Date: 14 July 2015

Reviewer: Erkan Kalafat

Reviewer's report:

This article is a prospective observational study investigating agreement between transperineal ultrasound and digital examination for assessment of cervical dilatation with addition of intra-observer repeatability. Study question is clear and methods are appropriate and well described. Even though some other studies investigated the issue in the past as authors properly cited, this work is novel because not many research (Dückelmann et al. 2010) have employed midwives as the ultrasound operators. Results of this work is significant due to following points;

- Ultrasound operator group consists both doctors and midwives.
- Intra-observer repeatability analysis
- Emphasis on a short-coming of transperineal ultrasound, i.e. difficulty of assessing dilatation at higher (8cm+)
- Limited data available on the subject

Overall writing of the article is clear and direct. Limitations of the study are well pointed out. I have some minor revision recommendations.

- Major Compulsory Revisions

None

- Minor Essential Revisions

1. Materials and Methods: In Table 1 authors reported postpartum bleeding amount of parturients. Whether this observation is based upon objective measurements or determined via visual approximation is not stated in methods. It would be appropriate for authors to state the method of measurement or remove the information all together as it’s not directly related to study question.

2. Results: In paragraph 4 confidence intervals of PCC is missing.

3. Results: In paragraph 5 authors used a three-way ANOVA model to give intra-observer ICC and repeatability coefficient. Is there any reason why those calculations were made for only one observer (SB) when there are 3 more observers. An explanation such as inadequate number of observations by other
observers would be nice. Also confidence intervals of repeatability coefficient is missing. If statistical software authors have used did not calculate it they can refer to the work of Bartlett et al. (Ultrasound Obstet Gynecol. 2008 Apr;31(4):466-75. doi: 10.1002/uog.5256.) which explains a formula to calculate it.

- Discretionary Revisions


2. References: Journals author guideline states journal names should be abbreviated according to MEDLINE style.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests