Reviewer’s report

Title: Fetal heart rate abnormalities during and after External Cephalic Version: which fetuses are at risk and how are they delivered?

Version: 0 Date: 27 Nov 2016

Reviewer: Shawn Walker

Reviewer's report:

Thank you for asking me to review this article, from a team that has added considerably to our collective knowledge around ECV.

This article adds the useful information that fetal heart rate abnormalities following successful ECV may not be associated with subsequent fetal distress in labour and mode of delivery, as has been observed in previous studies. I say may because the topic requires a systematic review to reach a more definitive answer than the conclusion would suggest. For the time being, this information will be reassuring to the 1:10 women who may fear for their babies following the stressful event of post-ECV fetal heart rate abnormalities.

The association with longer duration of ECV is clinically significant. It suggests a light-handed approach to ECV is desirable, especially in contexts where vaginal breech birth is well supported. However, the association with lower birth weight, while only just statistically significant, does not appear to be clinically significant. How would this knowledge change practical management of ECV and recommendations to women? It appears the lowest birth weight babies (1700g?) did not experience fetal heart rate abnormalities. In a similar vein, using birth weight as the only factor in the multivariate logistic regression adds little to practitioners' ability to predict fetal heart rate abnormalities based on estimated fetal weight. Estimated fetal weight and birth weight may correlate but often do not, and the key may lie in the discrepancies.

My main discomfort with this article is the range dates at which ECV is performed. I write as a midwife in the UK, where following the RCOG recommendations, ECV would usually not be performed at less than 36 weeks gestation for primigravidae, and 37 weeks gestation for multiparous women. I find it difficult to justify with evidence performing an ECV on a multiparous woman with two previous normal deliveries and a normal-sized fetus at 35+6 weeks gestation. Therefore, I am not sure how generalizable the results of this research would be to other practice settings as presented. One might also ask the purpose of performing an ECV at all on such a candidate in a country where the perinatal mortality associated with vaginal breech birth for multiparous women (0.06%, Vlemmix et al, 2014) is very similar to low risk cephalic births for multiparous women (0.05%, de Jonge et al, 2009).
Nevertheless, it is a well-written article which raises interesting questions about the relation of fetal heart rate abnormalities to subsequent fetal distress and mode of childbirth. It would benefit from more discussion around how the authors feel the research could be used in practice. Also, the paragraphing needs to be tidied up, and I had the following querie: (Line 25) The authors state that in half of the cases, the breech was in the pelvic outlet. Do they mean that the breech was engaged in the pelvic inlet?

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?**
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Yes

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No

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