Reviewer's report

Title: A comparison of maternal and neonatal outcomes between water immersion during labor and conventional labor and delivery

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Reviewer: Yaakov Beilin

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The authors performed a study to compare obstetric and neonatal outcomes of women who underwent water immersion in the first stage of labor vs. conventional labor. Patients were assigned to immersion (I) (n = 30) or conventional (C) group (n=70) based on patient request between 6/2009 and 2/2011. They found those that had water immersion had lower pain scores and a smaller cesarean section rate than those in the conventional labor group.

General comments:

The study was not randomized and few patients were enrolled. Without randomization one cannot determine cause and effect. At best one can suggest an association, but with so few patients enrolled there isn’t enough power to come to any conclusion and limits the findings.

Specific comments
Introduction:
This section is too long. Can decrease in half.

Methods:
Describe the usual process at the hospital. Does everyone have access to water immersion? How many patients usually use the immersion technique outside of the study?

Why were patients enrolled for 1.5 years? Why were only 108 patients enrolled? It would seem easy to enroll patients in this study as there are no risks involved? How many patients deliver at this hospital per year?

Is there something unique about these 38 women who wanted immersion? Why wouldn’t most women want immersion?

Why were patients asked to wait until they were 3 cm dilated to enter the tub?

Why did patients leave the tub to rest? What was exertional in the tub that required rest?

How was FHR monitored in the tub as well as maternal BP, HR etc. I would assume this would be difficult since the monitors would get wet.

Why were pain scores at 30 and 60 minutes after 3 cm dilation. What about the rest of labor?
Results
What % in each group is nulliparous vs multiparous. This is critical since nulliparous labors are generally longer and more painful
8 patients in the conventional group requested a cesarean delivery. Why? Doesn’t this mean they dropped out of the study. If these 8 were excluded then it is unlikely the data would be statistically significant.

Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
‘I declare that I have no competing interests’