Reviewer's report

Title: Direct versus indirect measurement techniques for the measurement of blood loss after delivery

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Reviewer: PICKLU CHAUDHURI

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Major Compulsory Revisions

Blood loss assessment after delivery to diagnose post partum haemorrhage addresses an important issue. The present study compared direct and indirect (gravimetric) methods of blood loss measurement. However, I have concerns related to different aspects of the methodology of study which need clarification.

a) The authors wrote: "We assumed that in a large sample of normal vaginal deliveries randomized only to a difference in blood measurement techniques, the mean blood loss recorded would not be significantly different if the two methods had the same reliability." what is the basis of such an assumption?

b) They have included women who had vaginal deliveries. How do the authors ensure that women with known high risk factors for PPH (i.e. obesity, prolonged labour, labour augmented by oxytocin, polyhydramnios, macrosomia, APH etc) were evenly distributed between the two groups? This needs explanation as results could be affected due to this. It is evident from the table that multiple pregnancy, another high risk factor was equally distributed among the two groups.

c) Blood was collected in the drape (direct method). Often it happens that blood clots are expressed on massaging the uterus after delivery. How did the authors deal with the blood clots in the two groups?

d) Soakage with amniotic fluid can also over or underestimate the blood loss. Nothing has been been mentioned regarding this.

e) The method of randomization is not clear.

f) The authors wrote "Hemoglobin measurements were taken at admission for delivery and at approximately twenty-four hours post-delivery." They have not included anything related to Hb (predelivery, post delivery or difference) in the results/Tables. A comparison of drop of Hb between the two groups may substantiate their observation that direct method was more effective.

g) Why did they record IV fluid and transfusion? No comparison was shown in this regard.

Discussion: this section need thorough revision. Amount of blood loss measured by direct and indirect methods in previous studies need to be mentioned and
compared with the results of the present study. Limitation/strength of the study was also not mentioned.

Table 1: Birth weight, preoperative Hb, BMI to be compared between the groups.

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

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

'I declare that I have no competing interests'