Reviewer’s report

Title: The effect of mode of delivery on HIV-1 disease progression and mortality in a Kenyan cohort

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Reviewer: Marcus Rijken

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Review BMC pregnancy and childbirth: The effect of mode of delivery on HIV-1 disease progression and mortality in a Kenyan cohort.

In this cohort study which was initially designed as a study on immune response in children born to HIV positive women. The authors use the data of the historical cohort to study the impact of mode of delivery on disease progression and mortality of the mothers. 13/501 mothers died in the first year post partum, most in the non scheduled cesarean section group.

There are several concerns:
• While the authors claim unscheduled CS was an independent risk factor for mortality post partum, they do not provide any information about the reason for the unscheduled CS; where those uterine rupture cases for example?
• All information on the post partum mortality cases should be available for readers so they can evaluate the reason for the mode delivery, the CD4 count status and the reason and timing of the mortality (months after delivery, year of death).

Introduction
• The authors describe the rationale for this study: maternal mortality is higher in SSA and treatment guidelines difficult to access. Readers may be very interested in the maternal mortality rate in Nairobi for HIV positive pregnant women outside the study and what is was for HIV negative women with a CS.

• Readers may also be interested in the treatment guidelines that were available at the moment of the study and the authors may decide to provide this information.

Methods
• Was the larger study published? Please provide a reference.
• Did all women receive the short course zidovudine?
• Was the ART treatment distributed evenly among the 3 groups? This became available only the last few years when relatively more SCS happened.
• The indications for SCS and NSCS should be provided in great detail in such a cohort study.
• Should ARV use be included in the models as well? or other infections malaria, diarrhoea?

Results
• What was the original size of the study cohort – when there was delivery information available for 501 – could there have been any selection bias?
• Why was there a dramatic increase in SCS over the years?
• Longer labors – how did the authors defined start of labor? And how was this documented in the records?
• Number of available post partum CD4 counts/ RNA were distributed relatively even among the groups?

Post partum mortality
• All clinical details of the 13 dead women should be provided – diagnosis, timing, reason for CS etc.
• Did the authors consider to include other confounding factors: parity, other infections (malaria?), socio economic status?

Discussion
How do the authors think the findings may influence labor or post partum management?

Table 2
In which years the deaths happened?

Figure 3
Could the authors provide the number of patients available in a table below the graph

Level of interest: An article whose findings are important to those with closely related research interests

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'