Author’s response to reviews

Title: Risk factors and outcome of patients with eclampsia at a tertiary hospital in Egypt

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Author’s response to reviews:

Dear Mr. Aronin,

Many thanks for potentially accepting our manuscript for publication in BMC Pregnancy and Childbirth. Our profound thanks go also to the reviewers for their valuable comments and suggestions. Please find below our responses to the points raised by the reviewers. We have uploaded a revised version of the manuscript including the necessary corrections. The changes in the manuscript have been highlighted with a yellow background.

Dear Mr. Easterling.

First, we would like to thank you for your positive comments and important points you aroused that would hopefully improve the manuscript and make it more suitable for publication.

* The statement "poor ante-natal attendance" suggests to me that care was available and that the woman did not take advantage of it. "Attending" is something that a woman would choose to
do or not. Is this what the authors intend to say? On the other hand, was prenatal are not readily available?

- Actually, the antenatal care is available in the primary health care units in all areas so that is what we intend to say. If women use these facilities, those with elevated BP can be detected earlier which in turn will reduce the high number of cases with severe preeclampsia / eclampsia

* The authors attribute high c-section rates to high complication rates in this study. Furthermore, they suggest that a higher rate of vaginal delivery should be encouraged in cases of eclampsia. Data regarding complications among women with c-section vs. vaginal delivery are not presented to support these conclusions.

The CS rate in this study was 70.8% which was even higher than the rates in the studies addressing the impact of the mode of delivery on maternal and neonatal outcome in patients with severe preeclampsia/eclampsia (reference 24:27). That high rate drives us to have such a suggestion especially that many patients developed complications related to excessive blood loss in addition to anesthetic and septic complications which usually encountered with CS rather than vaginal delivery. Actually, the impact of mode of delivery on outcome was not the purpose of the study and we suggested in the discussion section that further studies assessing the effect of mode of delivery on the maternal and perinatal outcome in the same area are needed. In fact, the same group of researchers is conducting now a large retrospective study to address that issue. Hopefully, we can submit it to BMC Pregnancy and Childbirth journal once finished

* The authors suggest that treatment with parenteral anti-hypertensives might improve outcomes. Again data to support this conclusion is not presented.

We suggest that parenteral anti-hypertensives might improve outcomes as they will be more effective in rapid control of BP. Use of such medications in women with severe preclampsia or eclampsia is the protocol in most hospitals in developed countries. Oral anti-hypertensive drugs usually have a relatively delayed onset of action. Keeping in mind the severity of cases in this study, we believe that rapid control of high blood pressure might have improved the outcome and reduce the rate of complications particularly the cerebro-vascular ones

* Only 178 of 250 women received oral anti-hypertensive therapy before delivery. Should women be treated more aggressively with oral agents? This seems more likely to be accomplished than establishing a reliable supply of parenteral agents.

We agree with you that aggressive oral therapy might be helpful as a more likely solution. We believe this point could be added to our hospital guideline. However, oral antihypertensive drugs could not be started due to disturbed conscious level of the patients.

* MgSO4 was clearly available - all patients received MgSO4. The hospital guidelines suggest use to prevent "further fits." Do hospital guidelines suggest use to prevent eclampsia? If not, should the guidelines be changed?
The hospital guideline suggests the use of MgSO4 to prevent further seizures and it was already given to all patients. However, in many occasions, MgSO4 was not available at the hospital and there was lag of time till it could be made available and be given to patients presented with severe preeclampsia. As a result, many patients have seizures during this time lag. In addition, we do not have sufficient data about whether the proper dose was given after delivery. We do not have infusion pumps, so we depend on clinical monitoring by the nursing staff. We have high work load at the hospital and relatively insufficient nursing staff, so improper dosing or early discontinuation of treatment are likely.

* Are presenting BP's available?

- Yes. 154 patients had severe hypertension (diastolic BP≥110mmHg) on admission, 92 patients had mild hypertension (diastolic BP 90-<110mmHg), and 12 patients had a diastolic BP <90 mmHg.

The presenting BP's was added to the results section.

* "The different presentation of cases on admission is shown in table 2." Should this be Table 3?

-We tried to use chronological sequence so we put data about presentation in table 2 and the onset and mode of delivery in table 3.

* What percent of women had seizures prior to admission? The pathway to decreasing the rates of seizures among women prior to admission is different from interventions available once admitted.

-77.6% (194/250) of women had seizure before admission. However, many patients were presented with severe hypertension and developed seizures before starting MgSO4 and anti-hypertensive therapy. This is another point related to our limited resources. As mentioned before, in many occasions, MgSO4 was not available at the hospital and there was lag of time till it could be made available and be given to patients presented with severe preeclampsia. As a result, many patients have seizures during this time lag. In addition, we do not have sufficient data about whether the proper dose was given after delivery. We have high work load at the hospital and relatively insufficient nursing staff, so improper dosing or early discontinuation of treatment are likely.

* Of the 100 with seizures after delivery, how many were admitted to this facility after the seizure, (they were delivered elsewhere)? If the seizures were in this facility, then aggressive interventions to improve care PP are warranted (eg. BP control, MgSO4).

- 73 patients developed postpartum seizures before admission in our hospital. 27 patients developed seizures after admission. That can be due to delay in the use of MgSO4 and improper control of BP. We agree that aggressive interventions to improve care are warranted.

* "Seizure" is probably a better choice of language than "fits. (Previously recommended).
- The word Fits is changed to seizures in the whole manuscript.

We hope that these responses would be satisfactory to the reviewers and the editorial team and the revised manuscript meet the criteria for publication in BMC pregnancy and childbirth journal.

I look forward to your response

Kind regards.

Yours sincerely,

Ahmad Mahran (corresponding author).