Reviewer’s report

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

Version: 0 Date: 29 Jan 2017

Reviewer: Thomas Easterling

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"Risk factors and outcome of patients with eclampsia at a tertiary hospital in Egypt," by Mahran et al is a retrospective study of eclampsia at a single hospital in Egypt. The objective of the study was to "get reliable data that helps in reducing the incidence and improving the outcome in an area with high incidence of eclampsia."

* Is the risk associated with short duration of marriage independent of the age of the patients?

* Is malaria endemic to this region of Egypt? Is the observed association with anemia associated with malaria?

* Is the association with interval between marriage independent of the risk associated with advancing maternal age?

* Is MgSO4 used for primary prevention of eclampsia? (MAGPIE) What percent of the eclamptic cases had seizures after presentation to the hospital with hypertension and were therefore eligible for primary prevention? Only 16.8% presented having already had a seizure.

* Can the authors conclude that the use of cesarean section contributed to complications? The reported rate is not higher than other reports. C-section is frequently done for fetal indication or for the acuity of maternal illness.

* In Table 1, 1-3 prenatal visits has an OR of 1.29 (1.18-1.39) but with a p-value of <0.534. Is this a typo?

* The authors report aOR's and indicate that a logistic regression was performed. Unadjusted OR's should be included. In addition, more details of the regression analysis should be included. Given the number of potentially interrelated variables, should a multivariate model be used?

* Some information about oral antihypertensive dosing would be helpful. If dosing was fairly nominal, a more aggressive oral dosing regimen might improve outcomes.

The study suggests a number of interventions that might decrease the eclampsia rate. Some are deeply rooted in social conditions and likely interrelated, (age, education, duration of marriage <
length of gestation, obesity). These are difficult to address but overtime could be amenable to public health intervention. Inadequate prenatal care is likely related to social factors but could be addressed independently. It is important to note that >8 visits had a lower risk than even 4-8 visits despite some recommendations for a reduced intensity of prenatal care. (This may of course not be causally related.) It seems that 83% of the patients presented prior to having a seizure. If we are to believe the MAGPIE Trial, 104 cases of eclampsia (half of the 208 without a presenting seizure and presumably hypertensive) could have been prevented with MgSO4. This if course leaves the question of how many women would need to be treated for primary prevention to achieve this outcome. Can the authors address this question?

**Are the methods appropriate and well described?**
If not, please specify what is required in your comments to the authors.

No

**Does the work include the necessary controls?**
If not, please specify which controls are required in your comments to the authors.

Yes

**Are the conclusions drawn adequately supported by the data shown?**
If not, please explain in your comments to the authors.

No

**Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?**
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

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