

Eclampsia in Janakpur Zonal Hospital, Nepal: Favourable outcome with Magnesium sulphate

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Abstract

Aim: To determine the demographic characters of patients of eclampsia and the effectiveness of Magnesium Sulphate in terms of maternal and perinatal outcome.

Methods: A prospective study of the eclamptic patients was conducted from 18th Aug – 17th Oct 2006 (1 Bhadra 2063 to 30 Ashwin 2063) attending the Obstetric Department of Janakpur Zonal Hospital (JZH).

Results: Of the 50 eclamptic women [ante partum 80%, intrapartum 6 % and postpartum 14%] with overall improvement in 92% although 2 cases had to be referred to center with ICU facility and 2 cases died. The demographic characteristics were young primiparous population of low socioeconomic condition. Caesarean was done for 48 %. Pretermaturity was seen in 50% and 76% were live birth.

Conclusions: Nepal has a high maternal mortality rate and eclampsia is a big contributing factor, which could be reduced by using magnesium sulphate widely in all parts of Nepal taking, ours as one of the peripheral hospital as an example.

Key words: Eclampsia, magnesium sulphate, maternal mortality

Introduction

Large randomized trials in developing countries and systematic reviews have shown the usefulness of magnesium sulphate in treating recurrent eclamptic seizures and in the prophylaxis of eclampsia^{1,2}. Despite this evidence magnesium sulphate remains underused.

A large number of eclamptic patients with consistent rise as winter approaches attend the Obstetric Department of Janakpur Zonal Hospital (JZH). Magnesium sulphate is used for the treatment of all patients of eclampsia was found to have better prognosis. Besides this, mode of delivery has been influenced by control of fits and fetal maturity. Hence we set forth to determine the demographic characters of eclamptic women and also to dissipate the

effectiveness of magnesium sulphate, in terms of maternal and perinatal outcome in Terai population of Nepal.

Methods

A prospective study of eclamptic patients was conducted from 18th Aug – 17th Oct 2006 (1 Bhadra 2063 to 30 Ashwin 2063) All the patients of eclampsia admitted during this period in JZH were included in the study. Findings at the time of admission were noted. Patients were followed-up everyday till the time of discharge. A prepared and pre-tested questionnaire was administered to all the patients after recovery. If patient was unable to answer the queries one of the closest relative, staying in the same household was asked the questions. Modality of management, maternal and perinatal outcome was noted.

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Results

Total no. of eclamptic patients were 50. Out of these 50 eclamptics, 46% were below 18 years of age at the time of pregnancy. Additional 40% were of 19-22 years of age. Those belonging to poor socio-economic class were 32% (fig1). Illiteracy was seen in 28 (56%).

Antepartum eclampsia was the most important finding making 80% of the total. This was followed by intrapartum and postpartum eclampsia 6% and 14% respectively. Of all these women 88% were nullipara in comparison to 12% multiparas. Gestational age was less than 37 weeks among 50% of the women at the time of delivery. 10% women were not sure of gestational age and scan could not be performed in these cases to confirm the gestational age. At admission, Systolic BP was below 160 mm of Hg in 82% women, whereas diastolic BP was below 110 mm of Hg in 90% of them (Table 1 and 2).

All these cases were resuscitated and one of the cases upon arrival could not be revived as she was already gasping. Stabilization was tried and one died while such effort was on process.

Two were stabilized and referred to Teaching Institute, while the rest of them were managed in our own hospital. Pritchard Regime of magnesium sulphate was followed. There were recurrence of fits but these were in few women. For control of hypertension, the drugs preferably used were Nefedipine.

Spontaneous vaginal delivery occurred in 42% of all the deliveries in the hospital with additional 14% occurring at home forming total vaginal delivery to be 62% including all other types of vaginal deliveries (6%). Rests 48% were delivered by LSCS done for eclampsia. Of all the deliveries 76% live birth. In terms of maternal benefit 92% women had their fits controlled by Magnesium sulphate.

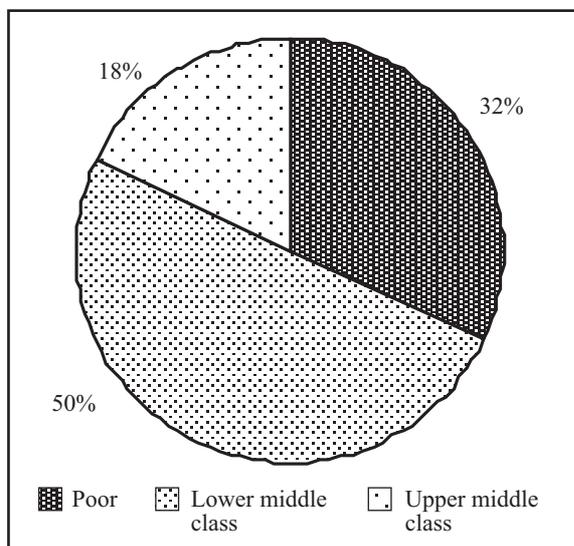


Table 1. Blood pressure at admission

Systolic BP	No.	%
<140	23	46
141-150	5	10
151-160	13	26
>160	9	18

Table 2. Blood pressure at admission

Diastolic BP	No.	%
<90	14	28
91-100	22	44
101-110	9	18
>110	5	10

Two women were referred to other hospital for ICU management and unfortunately other two women died during the course of treatment.

Discussion

It is surprising to find such a huge number of eclamptic women in the span of such a short time. Even 10 years data of a hospital with 3200 deliveries had 18 cases of eclampsia and 297 severe preeclampsia.³ The demographic aspects, showing early age at child bearing to be a contributing factor rather than pregnancy at older age in eclampsia.⁴ As is shown by the studies of Conde-Aguedlo⁵ nullipara comes up as a significant contributory factor in our study. As expected, incidence of eclampsia is not far less among socioeconomically advantageous group of women.⁶

Magnesium sulphate has already been established as an effective management for control of convulsion in eclampsia, but is still being underused.^{1,2,7} The study conducted in JZH reinforces the effectiveness of Magnesium sulphate by showing maternal improvement 92%.

However intubation facility for women in gasping condition upon arrival would have a proven benefit as ICU management imperative. This could give life to already moribund women, even in association of HELLP syndrome and renal failure.⁸

Eclampsia being seen in such a huge number, prophylaxis against preeclampsia is worth taking a consideration. For this at least pregnant women should have antenatal care coverage. It is rather wise to prevent worsening of preeclampsia/severe preeclampsia to eclampsia rather than to treat the condition.

Serum markers for predicting pre-eclampsia are placental protein 13 (PP-13), as well as soluble fms-like tyrosine kinase-1 (sFlt-1), placental growth factors (PlGF) and soluble endoglin (sEng) at a relatively early stage have shown high predictive values and improved diagnostic performance if combined with first trimester Doppler sonography.⁹

One third of women with raised antiphospholipid are seen to develop preeclampsia or severe preeclampsia/eclampsia with HELLP (hemolysis, elevated liver enzymes, and low platelets).¹⁰ But there are no facilities to adhere to such modern development.

What we can do most is to popularize community teachings of symptoms of preeclampsia and severe preeclampsia. Or have a group of people know about this condition while they are on queue, waiting for their turns in antenatal OPD. The problems with preeclampsia unlike anemia, is that, this cannot be detected on general physical examination.

For this it necessary to take blood pressure measurement, this needs training. Most of the time Blood pressure readings are fallacious because of the instrument itself or because of someone who takes them.

That is why urine examination is very important. It has been found out many times, women to collect the urine home for testing. Fresh urine is necessary for albumin testing. This can be easily taught, either by dipstick or by boiling. Though there are possibilities of urine infection in positive testing, but most of the women at least can be referred to centre where there is facility to record blood pressure. But then it would be sad to have them after admission in the tertiary care.¹¹

If all the women underwent urine testing in the community and those with positive albuminuria are referred to the nearest hospital, a lot of women would be detected and receive treatment thereby. And they would not have to be re-exposed to another pregnancy too soon to meet the fetal losses that have occurred in ¼ of cases, facing yet additional risk of iron depletion.

Conclusion

Nepal has a high maternal mortality rate and eclampsia is a big contributing factor, which could be reduced by using magnesium sulphate widely in all parts of Nepal taking ours as an example; one of the peripheral hospital, away from the capital.

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