MATERNAL AND PERINATAL OUTCOME IN SEVERE PRE-ECLAMPSIA AND ECLAMPSIA

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ABSTRACT

Introduction: Pre eclampsia and eclampsia are the leading causes of maternal and perinatal morbidity and mortality. Various maternal and perinatal complications are reported. Measures are taken to reduce these complications under child survival and safe motherhood program at various levels. Aims and objectives: This study was conducted in the Department of Obstetrics and Gynecology, RIMS, Imphal to study the impact of pre eclampsia and eclampsia on maternal and perinatal outcome. Material and methods: A prospective study was done on 81 pregnant women presenting with pre-eclampsia and eclampsia. Detailed history and examination was done. A complete hemogram, liver function tests, renal function tests, coagulation profile, fundus and 24 hours urine sample for protein were done. Patients were managed as per existing protocol of the department. Magnesium sulphate was the drug of choice for convulsions and labetalol and nifedipene was used for controlling raised blood pressure. Maternal and perinatal complications were recorded. Result: The 65.6% of the patients were unbooked with lower socioeconomic status in 74% and had rural background (74%). Headache was the most common symptom in 37% followed by blurring of vision in 14.8% and ascites 1%. Maternal complications like PH (33.3%), pulmonary edema (7.4%), renal dysfunction (4.9%), HELLP syndrome (3.7%), DIC (2.4%), abruptio placentae (1%) and pulmonary embolism (1%) were seen. Single maternal mortality was due to pulmonary embolism. Perinatal complications were birth asphyxia 27.1%, preterm delivery 24.6%, low birth weight 22.2% and IUD 8.6%. Conclusion: There is a high incidence of maternal mortality and morbidity and 65.6% of the patients had no antenatal care. Severe eclampsia and pre eclampsia can be prevented by providing early antenatal care. Considering lack of antenatal care at primary health care level, it is now the need of the hour to provide basic maternal health care to most of the population.

KEYWORDS: Pre-eclampsia, eclampsia, maternal morbidity, perinatal morbidity.

INTRODUCTION

Hypertensive disorder accounts for 12-22% of all pregnancy illnesses and is the most common medical complication.[1] Up to 10% of pregnancies are complicated with pre-eclampsia, which remains the leading cause of hypertension and is defined as newly diagnosed hypertension with a systolic blood pressure (SBP) >= 140 mm Hg or diastolic blood pressure (DBP)>=90 mm Hg and proteinuria (>= 0.3 gm protein in 24 hour urine specimen) after 20 weeks of gestation in a previously normotensive woman.[2,3]

Severe pre-eclampsia is considered when SBP>=160 mm Hg and DBP>=110 mm Hg or proteinuria >= 5 gm in 24 hour urine sample or oliguria, pulmonary edema, cerebral disturbances or visual disturbances, impaired liver function or thrombocytopenia is present.[4]

When a woman with pre-eclampsia presents with new onset grandma seizure, it is referred to as eclampsia. Thirty-eight percent have ante-partum, 18% intra-partum and 44% women have post-partum seizures.[5]

Pre-eclampsia ia the leading cause of perinatal complications and maternal morbidity and mortality worldwide.[5] Preterm labor, Intrauterine growth retardation (IUGR), Intrauterine deaths (IUD), accidental hemorrhage, pulmonary edema, cardiac failure, HELLP syndrome, disseminated intravascular coagulation (DIC), renal failure, adult respiratory syndrome (ARDS) and cerebral hemorrhage are the various complications associated with pre-eclampsia.[4] In India, 24% of all maternal deaths are due to pre-eclampsia and eclampsia.[1,2] Abruptio placentae, hepatic rupture and eclampsia are the major complications leading to maternal deaths.[6] Iatrogenic prematurity is the leading
cause of perinatal mortality which is increased five folds in patients with pre-eclampsia. Various studies are being conducted on patients with pre-eclampsia and eclampsia to evaluate the safe motherhood program. The present study was conducted in a tertiary care hospital of north east India to evaluate the maternal and perinatal outcome in patients with pre-eclampsia and eclampsia.

MATERIAL AND METHOD

The present study was conducted on 81 pregnant women of more than 20 weeks gestation suffering from severe pre-eclampsia and eclampsia admitted in the Department of Obstetrics and Gynaecology at a tertiary care referral unit in north east India.

Detailed history was taken as per institutional protocol and age, parity, gestation, signs and symptoms present, obstetric history and family history were recorded. General physical, abdominal and pelvic examinations were done. Investigations including complete hemogram, absolute platelet count, liver function tests, renal function tests, coagulation profile, fundoscopy and 24 hours urine for protein were performed in all the patients. Obstetric management was done as per existing institutional protocol. Magnesium sulphate was used for controlling convulsions. Phenytoin was given wherever magnesium sulphate was contraindicated. Blood pressure was controlled by oral nifedipine and methyldopa as per the need. Details of labour, type of induction, mode of delivery, maternal and perinatal complications was recorded. Data was compiled and analysed using SPSS software.

RESULTS

A total of 81 patients were included in the study out of which 34 were primigravida and the rest were multigravida; of which 4 were grand multipara (≥ 5).

Most common presenting symptom was headache (72.83%) followed by blurring of vision (23.45%), convulsions (13.58%), oliguria (0.04%), epigastric pain (0.03%), hematuria (0.024%) and ascitis (0.0123%).

There were 23 had severe form and 11 had eclampsia. Out of 11 patients of eclampsia, 8 (72.72%) had antepartum eclampsia, 1(9.09%) had postpartum and 2 (18.18%) patients had intrapartum eclampsia in the present study. Renal and liver functions were deranged in 9.87% and 18.51% patients respectively.

Commonest mode of induction was with oral misoprostol. Out of 72.83% vaginal deliveries, 9.87% were ventouse assisted, 4.93% were forceps assisted and 2.46% were assisted breech. Four deliveries were twin pregnancies. Twenty-two (27.16%) women were delivered by lower segment caesarean section (LSCS) and the indications were non-progress of labour (13.58%) out of which 11.11% had foetal distress with 6.17% accounting to meconium stained liquor, 8.64% were post caesarean section and 4.93% had malpresentation. Average hospital stay was 2 weeks.

Maternal complications were high as there was increased incidence of PPH (13.58%), HELLP Syndrome (6.17%), APH (3.70%), renal dysfunction (2.46%), DIC (2.46%) and pulmonary complications (2.46%). There was no maternal mortality.

Perinatal complications were also very poor due to increased incidence of prematurity (25.92%), low birth weight (39.50%), very low birth weight (7.40%), IUGR (20.98%), birth asphyxia (8.64%), low APGAR Score (11.11%). Perinatal mortality was 22.22%, out of which 4.93% were IUD, 2.46% were still births and 4.93% were neonatal deaths.

DISCUSSION

Pre-eclampsia and eclampsia still remains the leading cause of maternal morbidity and mortality throughout the world. Despite the advent of recent advances, it still remains a common problem in developing countries also due to illiteracy poverty, lack of health care education and poor antenatal care.

In our study, most patients were primigravida (41.97%) whereas Ketz et al reported 70% women as primigravida.[8]

Both pre-eclampsia and eclampsia are known to lead to prematurity. Most of the cases (25.92%) had preterm delivery which was in correlation to the findings reported by Tuffnell et al (65.3%).[9]

Headache was the most common antecedent symptom present in 72.83% of the patients followed by blurring of vision (23.45%), convulsions (13.58%), oliguria (0.04%), epigastric pain (0.03%), hematuria (0.024%) and ascitis (0.0123%).

In our study, PPH was found in 13.58%, HELLP Syndrome in 6.17%, APH in 3.70%, renal dysfunction in 2.46%, DIC in 2.46% and pulmonary complications in 2.46% respectively. There was no maternal mortality. However Tuffnell et al reported pulmonary edema in 2.3%, renal dysfunction in 0.55%, embolism in 0.28% and no maternal mortality.[9]

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CONCLUSION

Patients of pre-eclampsia and eclampsia are associated with a very high incidence of maternal and perinatal morbidity and mortality. If the pregnant women come for antenatal check up regularly, severe pre-eclampsia and eclampsia can be prevented. Diagnosis at an early stage and proper prenatal supervision helps prevent eclampsia and appropriate treatment will help in bringing down the aftermaths of pre-eclampsia and eclampsia to improve the maternal and perinatal outcome. Awareness among the patient, health education, improving poverty, giving proper antenatal care and properly implemented maternal and child care program can help such patients in long run.

REFERENCES