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Original Article

A Clinical Study of 100 Cases of Eclampsia In Rajshahi Medical College Hospital

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Abstract

Eclampsia is the occurrence of one or more convulsion in association with the syndrome of pre eclampsia. It is relatively uncommon in developed countries where it complicates about one in every 200 deliveries. Eclampsia can be 20 times more common in developing countries and it probably accounts for more than 50,000 maternal deaths worldwide each year. Which anticonvulsant for women with eclampsia Evidence from the collaborative Eclampsia Trial lancet 1995, 345, 1445-63. The main objective of this study was to observe the clinical profile of antepartum eclampsia cases. The study was carried out with 100 cases that were selected randomly during year 2004. 58% of the patients were primigravida; among them 25% patients were in age group 15-14 years. About 95% patients were illiterate, low socio economic group, and in 53% patients' convulsion occurred in 32-37 weeks of pregnancy.

Among 100 patients, 71 patients had normal vaginal delivery and 25% patients needed Caesarean section. Maternal mortality rate was 2%, perinatal mortality was 38%. Perinatal mortality was higher in vaginal group (12%) than LSCS group (7%).

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Introduction

Eclampsia is a very serious complication of pregnancy responsible for high maternal and perinatal mortality. Eclampsia is a largely preventable condition and has becoming rare in developed countries. The incidence of eclampsia has fallen in developed countries and has been reduced to 0.2-0.5 percent of all deliveries. Unfortunately in developing countries the incidence of eclampsia still poses a great problem in the field of obstetrics due to poor socio economic condition and lack of antenatal care. About 99 percent of all maternal death in the world occurs in the developing countries[2].

The percentage of maternal death from eclampsia in Bangladesh now 26% compared to a study in Bangladesh where maternal mortality due to eclampsia shown as 25-40 percent[4]. In Rajshahi Medical College Hospital, maternal mortality due to eclampsia was 16%.

From a study in a developed country has shown that 31.3 percent of the cases of eclampsia was not preventable despite adequate care and early hospitalization. The incidence of maternal mortality from such a serious complication can only be reduced by antenatal care, early diagnosis of pre-eclampsia, adequate medical management and judicious medical & obstetric interference.

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In our study 100 cases of antepartum and intrapartum eclampsia who were admitted in Rajshahi Medical College Hospital from October 2004 to March 2005 were analyzed. Age of the patient, gestational age of the patients on admission, mode of delivery and perinatal outcome and medical complications were noted.

General management according to protocol of Obstetrics and Gynaecological Society of Bangladesh Oct. 2004 is as follows. Magnesium sulphate loading dose, maintenance dose Inj. Hydralazine and Nifedipine, I/V fluid to maintain urine output 30 ml /hr till planned time of delivery.

For obstetric management all the patients under study after pelvic assessment were grouped into favourable (Bishop score 6-13) and those of unfavourable (Bishop score 0-5). Patients were randomly selected for induction with misoprostol, ARM with or without oxytocin, and for LUCS (lower segment caesarian section). All patients were followed till discharge or death.

Although the definitive management of eclampsia is delivery of the foetus and placenta as early as possible but as the eclamptic patient goes into labour quickly due to favourable cervix, most of the patients delivered vaginally. With the introduction of misoprostol for induction of labour few patients were induced with the drug with or without oxytocin infusion.

Aims and Objectives

This was a prospective and randomized study carried out in the Dept of Obstetrics and Gynaecology Rajshahi Medical College Hospital from Octobar'04 to March'05. This study was carried out to:

1. Analyze patient's age, gestational age, mode of delivery and types of complication, feto maternal outcome and prognosis.
2. Find out the effectiveness of induction and LSCS in eclampsia cases in improving the survival of mother and their babies.

Materials and Methods

Among the antepartum and intrapartum eclampsia patients admitted in eclampsia ward in RMCH 100 cases were taken into this study.

Patients were mainly treated by Inj. Diazepam, magnesium sulphate for controlling fit, Inj Hydralazine and calcium channel blocker sub lingually for controlling hypertension. Nutrition and fluid balance were maintained. Complications were managed accordingly. For obstetric management both primi and multi gravida patients, after pelvic assessment favourable and unfavourable (Bishops score) patients were separated. For both groups, same numbers of patients were selected for induction of labour by (misoprostol, ARM and oxytocin) and for LUCS randomly. Each case was followed till discharge or death.

Table I: Age distribution

Age in years	Primigravida	Multigravidae
15-19	25	08
20-24	09	16
25-29	15	12
30-34	06	04
>35	03	02

Table I shows that 58 patients were primigravidae & 42 patients were multigravidae. Most of the patients (58%) were of below age 25 years.

Table II: Gestational age of the patients on admission in weeks

Gestational age	No. of patients	Percentage
20-25	03	03%
26-31	10	10%
32-37	53	53%
>37	34	34%

Table II shows that 53% patients were near to term and 34% were at term.

Table III: Mode of delivery of eclamptic patients

Mode of delivery	No. of patients	Percentage
Normal vaginal delivery	71	71%
Caesarian section	25	25%
Craniotomy	02	02%
Forcep delivery	02	02%

Table III shows that 71% patients delivered vaginally, 25% had LUCS. 2% patients had destructive operation & 2% delivered normally assisted with forceps.

Table IV: Perinatal outcome

Perinatal outcome	No. of patients	Percentage
Alive	66	66%
Still birth	21	21%
Neonatal Death	17	17%

Table IV shows that 66% babies were alive. Among them 21% were born by LUCS and 44% by NVD. There were still birth 21% and neonatal death 17%.

Table V: Maternal complications

Complications	No. of patients	Percentage
Pulmonary oedema	16	16%
Cerebro vascular accident	03	03%
PPH	21	21%
Wound infection	06	06%
Burst abdomen	02	02%
Obstructed labour	01	01%
Post-partum psychosis	01	01%
Obstetric shock	03	03%
Death	02	02%

Though eclampsia is a disease of complication 45% patients had no such conditions. The remarkable complications were pulmonary oedema (16%), PPH (21%), wound infection (6%), death (2%) and so on. 1 patient had died of acute renal failure and 1 died due to cerebro-vascular accident.

Discussion

Eclampsia is a very serious hypertensive disorder of pregnancy. Both Maternal and perinatal mortality are high in spite of the different preventive approaches to improve obstetric care in Bangladesh; eclampsia still contributes 16 percent of the maternal mortality on a national basis.

Eclampsia usually occurs in patients at both extremes of reproductive age, however the risk of eclampsia is greatest in women younger than 20 years. In my study about 30% patient was in 15-19 years group. About 5% were above the age of 35 years. Among the total patients about 58% were primigavida and 42% were multigravida. The socioeconomic status, level of education, the quality of patients' nutrition and antenatal care of the patients in our study were very low. These results are comparable with other results.[1, 4,5,6]

92% patients had 10 or fewer bouts of convulsions before admission. All the cases were treated by Inj. Magnesium sulphate. Regarding gestational age of the patients on admission 53% patients were 32-37 weeks of pregnancy and 34% were above 37 weeks of pregnancy.

In majority of cases with antepartum eclampsia, labour starts soon after convulsions. But when labour fails to start, caesarean section was done. In my study 71% was NVD and 25% was LSCS and the rest were craniotomy and forceps delivery. Among the live birth, APGAR score rating were compared. Vaginal delivery group had better APGAR rating than caesarean section group. Similar result was found in one study[5, 6]. This might be due to anaesthetic drug effect. Perinatal mortality was higher in vaginal delivery group (27%) than LSCS group (7%). A Chinese study showed 55.66% caesarean delivery. So this study was a profile of cases where early delivery was chosen as a means of treatment for eclampsia[7]. Perinatal mortality in different studies show 38.6%[9], 47%[4], 41%[1], 39%[6] and only 2.78%[7], In my study perinatal mortality was 38%.

Regarding maternal complications 45% patients had no complications. Analyzing maternal complication pulmonary oedema (16%) and PPH (21%) were more both in vaginal & caesarean delivery. In LSCS wound infections was common (60%). Two maternal deaths occurred, one was due to cerebro-vascular accident and one death was due to acute renal failure.

Regarding maternal complications 45% patients had no complications. Analyzing maternal complication-pulmonary oedema (16%) and postpartum haemorrhage (21%) were more both in vaginal and caesarian delivery. In LUCS wound infection was common (6%). Two maternal deaths occurred; one death was due to cerebrovascular accident & another was due to renal failure.

If we want to reduce the maternal and perinatal mortality we should have improved the socio economic condition, great need for public health education expansion of education and training of personnel in the best professional techniques of maternal and neonatal care. By adopting these measures, incidence of eclampsia can be reduced. When eclampsia is established, immediate hospitalization with best available nursing care and medical management with early termination of pregnancy should be done. If vaginal delivery is not anticipated shortly, caesarean section should be performed after correcting the haemodynamic status and acidemia in best possible set up, only then the desired results can be achieved.

Conclusion

Eclampsia is one of the grave diseases, peculiar to pregnancy, which are still major causes of maternal mortality in Bangladesh. Death due to eclampsia is high in hospital maternal death. This high mortality is due to poor socio economic condition, lack of education, inadequate and defective antenatal care.

Various drugs and methods tried world wide for management of eclampsia and its complication but the final way is to termination of pregnancy that is the delivery of foetus and placenta. So intellectual judgement should be exercised for the safe mode of termination of pregnancy as early as possible. Properly timed caesarean section in selected cases can improve the outcome of mother and foetus.

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