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INCIDENCE OF ECLAMPSIA AND ITS OUTCOME IN COALFIELD AREA OF DHANBAD

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ABSTRACT

Eclampsia is the leading cause of maternal and perinatal mortality as well as morbidity. This prospective study was carried out at PMCH, Dhanbad

Aim and objectives: (1) To evaluate the rate of eclampsia in antenatal women attending our hospital, (2) to evaluate the epidemiological factors and clinical presentation in women with eclampsia, (3) to analyze the maternal and perinatal outcome in women with eclampsia, and (4) to formulate strategies to improve the maternal and perinatal outcome.

Methodology: It is a prospective study, carried out on 100 pregnant women admitted with severe pre-eclampsia and eclampsia at PMCH, Dhanbad. Detailed history and examination was carried out. Investigation like complete hemogram, liver function tests, renal function tests, coagulation profile, fundus and 24 hour urine for protein were done. Obstetric management was done as per existing protocol in the department, magnesium sulphate was the drug of choice for controlling convulsions and blood pressure was controlled either by oral nefidipene or Labetalol. Maternal and perinatal complications were noted down.

Results: The majority of the patients was unbooked (80%), belonged to lower socioeconomic status (82%) and had rural background (82%). Headache was the most common antecedent symptom (44%) followed by epigastric pain (20%), oliguria (9%), blurring of vision (8%) and ascitis (5%). There was high incidence of maternal complication like PPH (31%), abruption placentae (11%), renal dysfunction (8%), pulmonary edema (8%), pulmonary embolism (4%), HEELP syndrome (2%) and DIC (2%). Maternal mortality was 8% and the causes were pulmonary embolism in four women, DIC in two, HELLP and pulmonary edema in one each. Perinatal complications were also high 71.43% were low birth weight, 66% had preterm delivery, 52.4% babies had birth asphyxia and 28.57% were still born Maternal and perinatal outcome was much poorer in eclampsia as compared to severe pre-eclampsia.

Conclusion: There is a very high maternal and perinatal morbidity and mortality and 80% jpatients had no antenatal care. Good antenatal care could have been prevented severe pre-eclampsia and eclampsia to some extent. Thus it is suggested that developing countries have to go a long way to create awareness about importance of antenatal checkups and take measures for implementation.

INTRODUCTION

Eclampsia is an upredictable multiorgan disease unique to pregnancy. Treatment of this disease still remains a challenge. Antepartum eclampsia is more dangerous than postpartum eclampsia. Incidence of eclampsia in India is 0.94% to 1.8% in all pregnancies.

Magensium sulfate is most preferred anticonvulsive agent and has been very effective in reducing maternal and perinatal mortality and morbidity. Cerebral anoxia, brain damge and coma are the sequelae of eclampsia and magnesium sulfate has proved superior to diazepam with low fit recurrence and quick recovery form coma and the fetal salvage is improved substantially.

Suitable early intervention is required to prevent lifetheatening complications. Keeping the above factors in mind we started this study in our hospital.

METHODOLOGY

The present study was carried out on 100 pregnant women with more than 20 weeks of gestiation of severe pre-eclampsia and eclampsia who were admitted in the Department of Obstetrics and Gynecology in our institute (PMCH Dhanbad) from Jan2012 to Dec. 2014.

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On admission, detailed history regarding age, parity, period of gestation, signs and symptoms, obstetric and family history was recorded from the patient or patient's attendant. After that, general physical, abdominal and pelvic examinations were carried out. Investigations like complete hemogram, absolute platelet cont, liver function tests, renal function tests, coagulation profile, fundoscopy and 24 hours urine for protein were performed in all the patients. Obstetric management was carried out as per existing protocol in the department. Magnesium sulphate was the drug of choice for controlling convelsions, if contraindicated, phenytion was given, Blood pressure was controlled either by oral nifedipene or Labetalol singly or in combination as per the need. Details of labor whether it was spontaneous or induced, method of induction and mode of delivery were recorded. Maternal and perinatal complication were noted down. At the end of the study, the data was complete and analyzed.

RESULTS

Results are shown in Tables 1 to 5. Most common presenting symptom was convulsions (51%), followed by headache (44%), epigastric pain (20%), blurring of vision (8%), oliguria (9%) and ascites (1%). Twenty (20%) of the patient had no symptoms, they were just referred for high blood pressure, and 41, 31 and 10 had one, two and three symptoms respectively. There were 49 patients with severe pre-eclampsia and 51 with eclampsia. Out of 51 patients of eclampsia, 41 (80.39%) had antepartum eclampsia, 10(19.61%) had postpartum and one patient had intrapartum eclampsia in the present study.

Table 3 Mode of Delivery of women with eclampsia

Mode of Delivery	Number of Women	(%)
Normal Vaginal Delivery	62	62
Instrumental Delivery	6	6
Ceasarian Section	32	32

Table 4 Distribution according to mode of induction and delivery

Maternal Complications	No.	%	Retal omplications	No.	%
PPH	31	31%	Preterm	66	67.33%
Abruptio placentae	11	11%	Weight (<2.5Kg)	70	71.43%
Renal dysfunction	9	9%	Birth asphyxia	21	21.43%
Pulmonary edema	8	8%	IUD	28	28.57%
Pulmonary emolism	4	4%	IUGR	23	23.47%
HELLP syndrome	2	2%	Shifted to nursery	28	28.57%
DIC	2	2%	GCMF	0	0.00%
Maternal mortality	8	8%	Perinatal mortality	36	36.73%

DISCUSSION

Despite advances in medical practice, pre-eclampsia/eclampsia has remained a leading cause of maternal mortality throughout the world. It is a common problem in developing countries because of illiteracy, poor antenatal care, lack of health awareness and poverty. The majority of the patients were unbooked (80%), belonged to low socioeconomic status (82%), had rural background (82%), were less than 30 years of the age (90%) and were primigravida (73%) (Table1).

Table 1 Distribution of patients as per demographic profile and other parameter

Booking Status		Residence		Education		Age (Years)		Parity		Gestation (weeks)	
Booked	20%	Rural	82%	Illiterate	60%	<20	19%	0	73%	≤ 28	7%
						21-30	71%	1	17%	29-36	59%
Unbooked	80%	Urban	18%	Literate	40%	30-40	10%	2	10%	≥ 37	34%
						Mean	24%	Mean	47%	Mean	35%
						± SD	± 4.2			± SD	± 4.08

Table 2 Distribution of patients as per investigations

Proteinuria(%)		Renal Function tests (%)		Liver function tests (%)		Fundoscopy (%)	
≤ +1	4%	Blood urea ≥ 40 mg %	45%	SGOT > 100 IU	20%	Normal	94%
.+2	23%	S. Creatinine ≥ 4 mg%	27%	SGOT > 100 IU	20%	Hypertensive changes	3%
≥ ± 3	73%	Oliguria	9%	Alkaline phosphatase>400IU	34%	Papilloedema	3%

Renal and liver functions were deranged in 27% and 20% patients respectively (Table 2). Commonest mode of induction was with oral misoprostol. There were total of 98 patients who delivered as two patients died in antepartum period without delivery. Thirty-two percent women were delivered by lower segment cesarean section (LSCS) and the indications were fetal distress (59.28%) followed by nonprogress of labor (12.5%), impending eclampsia with poor bishop score (18.75%) and breech in (9.38%). In 95% patients magnesium sulphate was given as anticonvulsant and in other 5% phenytoin regimen was started as magnesium sulphate was contraindicated. Average hospital stay was 6.32 ± 4.07 day. Hospital stay was less than three days, 4-6 days, 7-10 days and more than 10 days in 25, 29, 42, and four patients respectively. One patient had to stay for more than 20 days due to wound infection after cesarean section.

Ketz *et al* reported 70% women as primigravida. only 7.54% patients of eclampsia as compared to 51% in present study and the morbidity and mortality for eclampsia is much more than pre-eclampsia.

Headache was the most common antecedent symptom present in 44% of the patients followed by epigastric pain (20%) and blurring of vision (8%). Douglas *et al* reported headache, epigastric pain and blurring of vision in 50%, 19% and 19% patients respectively, results are almost similar to the present study. Labor was induced in 48% of the patients either with foley's catheter or prostaglandins. Tuffnell *et al* reported induced labor in 36.2% of the patients. Thirty two percent patients had LSCS (Table 2), while Tuffnell *et al* , Al Inizi *et al* Sibai *et al* reported cesarean section rate of 72.1%, 54% and 49% respectively which is much higher than present study.

Table 5 Comparison of matemal and perinatal outcome in eclampsia and severe pre-eclampsia

Parameter	Maternal outcome eclampsia n	%	S. Pre-eclampsia N	%	Parameter	Eclampsia	%	S. Pre-eclampsia N	%
Abruptio placentae	1	1.96	10	20.41	Preterm	38	74.51	25	57.14
HELLP	1	1.96	1	2.04	SGA	10	19.61	13	26.53
Renal dysfuntion	6	11.76	2	4.08	Birth asphyxia	13	25.49	8	16.33
Pulmonary edema	7	13.73	1	2.04	IUD	15	29.41	12	26.53
Pulmonary embolism	2	3.92	2	4.08	GCMF	0	0	0	0
PPH	26	50.98	5	10.2	Shift to nursery	20	39.22	8	16.33
DIC	2	3.92	0	0	Weight (<2.5kg)	35	68.63	25	51.02
Death	4	7.84	4	8.16	Perinatal mortality	19	37.25	17	34.69

CONCLUSION

There is a very high maternal and perinatal morbidity and mortality in patients of severe pre-eclampsia and eclampsia. 82% patients had no antenatal care. Would they have come for antenatal check up, severe pre-eclampsia and eclampsia could have been prevented. Early diagnosis and good prenatal supervision can prevent eclampsia to a large extent and appropriate treatment will ameliorate many cases sufficiently so that maternal and fetal outcome is satisfactory. Thus it is suggested that developing countries have to go a long way to create awareness about antenatal checkups and take measures for implementation.

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