

Original Research Article

Prevalence and Fetomaternal Outcome of Eclampsia – A Cross Section Study at J.L.N.M.CH, Bhagalpur, BIHAR

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Abstract

Objective- In this study we have analysed the eclampsia cases and evaluated the maternal and perinatal outcome.

Material and Methods- the study was carried out from March 2021- Feb 2022 in Jawaharlal Nehru Medical college and hospital, Bhagalpur, Bihar. **Results:-** The period prevalence of eclampsia at our centre was 13%. Majority of the cases of eclampsia were referred cases from adjoining districts. An average age of presentation was between 20-29 years and nearly 3/4th of the cases was primigravida. Nearly 40% cases had some form of medical complications and around 65% had obstetrical complications due of eclampsia. Maternal mortality at our centre due to eclampsia was 9.6% and perinatal loss was 14.3%. **Conclusion :** - The importance of adequate antenatal care and early detection of pre-eclampsia syndrome can reduce the frequency of their morbid condition in pregnancy. Timely referral of these women by the healthcare providers in peripheral centres can help them in seeking optimum management.

Key words: - Eclampsia, pre-eclampsia, Maternal morbidity, perinatal loss, Magnesium sulphate.

INTRODUCTION-

Hypertensive disorders are one of the serious medical complications of pregnancy affecting 5-10% of all Pregnancies. The spectrum of disease ranges from mildly elevated blood pressure to severe hypertension and multiorgan dysfunction. Pre-eclampsia complicated by generalised tonic clonic convulsions or coma during pregnancy or post partum is called Eclampsia. In India the reported incidence of eclampsia is varies from 0.179 to 3.7 percent. The maternal mortality rate of eclampsia in India ranges from 2-30 percent depending upon severity of complications.

Perinatal morbidity and mortality depend upon gestational age, presence of intra uterine foetal growth restriction & mode of delivery depending upon the timing of convulsion; eclampsia is grouped as antepartum, intrapartum & postpartum.

The aim of the study is to determine the prevalence & fetomaternal outcome of eclampsia patients.

Materials and methods –This cross-sectional study was carried out from march 2021-Feb 2022, in Jawaharlal Nehru medical college and hospital, Bhagalpur Bihar.

Inclusion Criteria

All pregnant patient more than 24 wks of gestation with eclampsia, managed in our obstetric department.

Exclusion Criteria - patients with epilepsy or other causes of seizures (fever epilepsy, electrolyte imbalance and hypoglycaemia) were excluded.

RESULT –

Out of 6,114 deliveries during the period of study there were 806 cases of eclampsia giving a foetal prevalence of 13% Since it is a tertiary care Hospital Almost all cases of eclampsia from the adjoining districts are referred to our hospital, There is two to three eclampsia patient admission daily.

Referral status

Ref from PHC	785	97.4%
Booked with our centre	21	2.6%
In our labour room daily		

Table 1. Sociodemographic characteristics of eclampsia patients and gestational age on admission

Characteristics age	Freq	Percentage
<19 Yrs	408 (208)	25.5%
20-29	327(527)	65.4%
30-39	71(71)	8.8%
>40	0	0%
Parity		
Primigravida	589	73.07%
Multigravida	217	26.92%
Residence		
Urban	109	13.5%
Rural	697	86.4%
Booking status		

Booked	103	12.78%
Unbooked	703	87.2%
Gest age at presentation		
24-28 wks	114	14.1%
29-34 wks	286	35.5%
35-36 wks	260	32.52%
37-41 wks	140	17.36%
>42 wks	0	0

The majority 527 cases out of 806 (65.4%) were in the age group 20-29Yrs followed by 25.8% cases in the age group <19Yrs and 8.8% in the age group 30-39yrs. Nearly 589 cases (73.07%) were primigravida, were as 217 cases (26.92%) were multigravida. Majority of eclampsia patients, 697 out of 806 (86.4%) were from rural area and only 13.5% were from urban area .Since, our centre is a referral centre, 97.4% of eclampsia patients getting admission in labour room were referred from PHC and only 2.6% were booked with our centre. 703 cases of eclampsia out of 806 had no ANC. and 103 out of 806 had irregular ANC Almost 70% cases present between 29-36 weeks of gestation . 17.36 % of cases presented at term , that is after completion of 37 weeks 14.1% of cases that is 114 cases out of 806 presented before 29 weeks of gestation.

Table 2. Depicts the course of the disease from referral centre and after admission at our centre

Characteristics	Freq.(n)	Percentage %
Timing of eclampsia		
Ante partum	663	82.2%
Intra partum	36	4.4%
Post partum	89	10%
Antepartum+intrapatum+post partum	18	2.2%
No. of convulsion		
1	183	22.7%
2-4	397	49.2%
>4	226	28.0%
Time since 1 st convulsions to admission		
<1Hr.	14	1.7%
2-4Hr.	267	33.12%
5-8Hr.	587	72.82%
>8Hr.	34	4.2%
Mg so4 Treatment		
Received	608	75.4%
Not Received	198	24.5%
Diagnosed with pre-eclampsia		
Yes	369	45.7%
No	437	54.2%

Table 2 enumerates the course of the eclampsia women from the referral centre to admission to our centre. According to the timing of convulsion there were 663 cases (82.2%) out partum, 36 cases (4.4%) intra partum and 89 cases (10%) post-partum eclampsia during the study period.

Nearly 596 cases (74%) had blood pressure of <160/10mm Hg at presentation 169 (21%) had systolic blood presser ranging 161-179 mm Hg and diastolic blood pressure saying 111- 129 mm Hg Only 32 (4%) had blood pressure more than 180/130 About 183 cases (22.7%) had only one convulsion 226 cases (28%) had more than four episodes of convulsion.

1.7% cases reached our centre for the treatment within one hour of the first convulsion episode however 34 cases (4.2%) reached after 8 hours 4.2% cases which reached our centre after 8 hours of first convulsion or after four convulsion presented with poor Glasgow come score (GCS) Magnesium sulphate is the drug of choice to prevent convulsions in women with pre-eclampsia and eclampsia at our centre.

Table 3 enlists the mode of delivery and various complications of eclampsia Out of 806 patients 492 cases (61%) had vaginal delivery and 308 (38%) had caesarean section 6 patients (7%) died in the ante natal period, without delivery of fetus 503 cases (62%) had no medical complications Among the rest many of them had more that one complication associated with eclampsia Aspiration peritonitis was seen is 3 cases (0.3%) and trauma due to tall from bed during eclampsia was seen is 13 patients (1.6%) . The most common complication associate with eclampsia in our study was acute kidney injury seen is patents (11.7%)

Table 3. Depicts the mode of delivery and maternal medical and obstetrical complications of eclampsia

Characteristics	Freq.(n)	Percentage %
Mode of delivery		
Vaginal delivery	492	61%
Caesarea delivery	308	38%
Undeliverd	6	7%
Maternal medical complication		
No medical complication	503	62.4%
Aspiration Pneumonitis	3	0.3%
Pres syndrome	75	9.3%
Status eclampsia	13	1.6%
Intracranial haemorrhage	25	3.1%
Pulmonary edema	11	1.3%
Peripartum cardiomyopathy	16	2%
Acute kidney injury (AKI)	95	11.7%
Disseminated intravascular coaj(DIC)	19	2.3%
HELLP Syndrome	86	10.6%
Liver failure	23	2.8%
ICCU Admission	48	5.95%

Ventilator support	39	4.8%%
Maternal obstetrical complication		
No obstetrical complication	208	25.8%
Preterm delivery	501	62.%
Abruption placenta	19	2.3%
IUGR	106	13%
IUD	61	7.5%
Still birth	58	7.2%
TPH	42	5.2%

Followed by HELLP (Haemolysis, Elevated liver enzymes low platelets count⁷⁵) in 86 cases (10.6%),

75 patients (9.3%) had posterior reversible encephalopathy syndrome (PRES) 13, patients (1.6%) had status eclampsia and 25 patients (3.1%) had intra cranial haemorrhage other complications like disseminated intra vascular coagulation (DIC) is 19 patients (2.3%) peripartum cardio myopathy in 16 patients (2%) and pulmonary oedema in 11 patients (1.3%) were seen.

Out of the 806 cases, 501 cases (62%) had preterm termination of pregnancy, 106 cases (13%) had intra uterine growth restriction 61 cases (7.5%) and 19cases (2.3%) had intrauterine foetal demise and abruptio placenta respectively PPH was seen is 42 cases (5.2%) and maternal mortality recorded was in 78 (9.8%) cases and perinatal loss was 116 (14.3%)

Perinatal outcome is important as most of the babies born are early/ late preterm or growth restricted babies 58 babies (7.2%) were steal birth. 764 cases (94%) had birth weight less than 2.5 kg majority being less than <1.5kg (38.2%). 592 babies (73.4%) had APGAR score less than 6 at 1 minute. Out of which 526 babies (65.2%) required NICU admission. science birth asphyxia was seen in 13 babies (1.6%)

Table 4: Depicts Neonatal outcome

Characterises	Freq.(n)	Percentage (%)
<1500g (birth weight)	308	38.2%
1500-2500g	456	56.5%
2500-3000g	36	4.4%
>3000g	6	0.74%
Apgar Score		
<6	592	73.4%
>6	214	26.5%
NCV Admission	526	65.2%

CONCLUSION:

As hypertensive disorders complicating pregnancy remain the major cause of maternal and prenatal morbidity and mortality worldwide. This study helps to identify the importance of

understanding the disease process and impact of eclampsia in maternal and perinatal outcomes.

Eclampsia is a preventable complication of pre-eclampsia. So, diligent antenatal care, early and timely intervention and proper high dependency unit at tertiary hospital with the help of multidisciplinary team including obstetrician anaesthetist and intensivist will decrease the trend in morbidity and mortality of eclampsia patients in India.

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