

FETOMATERNAL OUTCOME IN ECLAMPSIA IN A TERTIARY CARE CENTRE.

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ABSTRACT

Background-

Eclampsia is a life threatening emergency that continues to be a major cause of maternal mortality and morbidity worldwide .

Aims and Objectives :The aim of the study was to evaluate the maternal and perinatal outcome and complications in cases with eclampsia.

Materials And Methods: A prospective clinical study was carried out on eclampsia patients in the department of obstetrics and gynaecology of Jorhat Medical College and hospital.Patients with convulsions other than eclampsia were excluded.Investigations and management were carried out as per standardized department protocol and maternal and fetal outcomes were analyzed.

Results:56 number of cases were studied.Majority of the patients were in the age group of 20-25 years (67.78%).Most of the cases were without proper antenatal checkup (66.07%)Majority of cases were primigravida 85.71% Most of the patients were admitted with antepartum eclampsia 51.79%.Out of antepartum eclampsia patients majority were between 33-36 weeks (55.36%).Most of patients delivered by LSCS 41.07%.Most common indication of LSCS was fetal distress 30.43%.Maternal complications seen in 60.71 % ,most common complication was post partum haemorrhage 21.43%.There was 2 near miss cases in our study 1 with DIC 1 ARDS.There was one maternal death in this study due to pulmonary edema .Maternal mortality in our study 1.7%.46.43% of neonates were admitted in NICU.Most of neonates were preterm 67.86% .5.36% of Intrauterine deaths are observed and 5 neonatal deaths seen.

.Neonatal mortality was 5.36%.

Conclusion : Accessible health care and health education and awareness regarding antenatal checkups for all women will lead to early detection of preeclampsia .Prompt treatment and management of its complications will certainly improve the maternal and fetal outcome.

Key words-Eclampsia,maternal and fetal outcome,parity,types of eclampsia

Conflict of interest-None Disclaimer-None

INTRODUCTION

The earliest historical documentation of eclampsia comes from Hippocrates ,who noted that headache ,seizures and altered consciousness were ominous sign seen in some pregnancies .The term eclampsia is derived from greek word meaning 'like a flash of lightening'.The term eclampsia first appeared in the Varandaeus treatise on gynaecology.¹Eclampsia is defined as new onset of grand mal seizure activity and /or unexplained coma during pregnancy or post partum in a woman with signs or symptoms of preeclampsia and is one of the serious obstetric emergency.Eclampsia is a life threatening emergency that continues to be a major cause of maternal mortality and morbidity worldwide.

Eclampsia is defined as occurrence of convulsion in a patient with pre-eclampsia with no coincidental neurological disease. The diagnosis of pre-eclampsia is based mainly on the presence of hypertension (BP 140/90 mm of Hg) after 20 wks of gestation and proteinuria (300 mg/24hr or 1+ dipstick).²

Eclampsia is the most common in the last trimester of pregnancy and becomes increasingly more frequent as term approaches.Eclampsia may be antepartum,intrapartum and post partum .Antepartum eclampsia is more dangerous than post partum eclampsia.

.Eclampsia nearly affects 1.4% of births worldwide.It has been estimated that approximately 5000 women die each year worldwide from this dreaded disease³. A maternal mortality of 3% to 4%and perinatal mortality of 30% to 40 % may occur following eclamptic convulsions.⁴ According to WHO report 2005, eclampsia still accounts for 12% of the maternal death throughout the world. WHO estimates that eclampsia develops in 2.3% of preclamptic women in the developing countries ,compared to 0.8% of preeclampsia occurs in developed countries.Various maternal complications in eclampsia are seizures associated complications like status and aspiration pneumonia ,electrolyte imbalance,DIC,renal failure,elevated liver enzymes,HELLP syndrome and neurological deficit can occur and may be life threatening.Other complications are cortical blindness ,abruption placentae and later development of long term metabolic and cardiac complications.⁶The common cardiac complications seen in eclampsia may include increased work load, diastolic dysfunction, left ventricular failure and myocardial damage.⁷Other complications may include cortical blindness, abruptio placenta and later development of long term metabolic and cardiac complications.⁸Serious and untreated cases may result in maternal death.⁹Serious and untreated cases may lead to maternal death.In the fetus IUGR,preterm delivery,birth asphyxia and cerebral palsy.Though exact etiopathogenesis of eclampsia is not well understood ,defective placentation and endothelial dysfunction are considered to be the core features.Eclampsia is to be more common in rural population,young age ,unbooked cases and primigravida.

This study is carried out in Jorhat medical college and hospital which is a tertiary care centre .Here patients are referred from various districts in the upper assam and urban areas.Here the study conducted in JMCH reflects the general status of maternal health care in this region.

AIMS AND OBJECTIVES

The objective is to study maternal and fetal outcomes in eclampsia.

INCLUSION CRITERIA-

All antepartum ,intrapartum and postpartum eclampsia are included.

EXCLUSION CRITERIA-

Patient with convulsion due to cause other than eclampsia like Epilepsy , CVT's, infection, trauma.

MATERIALS AND METHODS

STUDY PERIOD-JANUARY TO SEPTEMBER 2022(9 months)

METHODS- Prospective clinical study

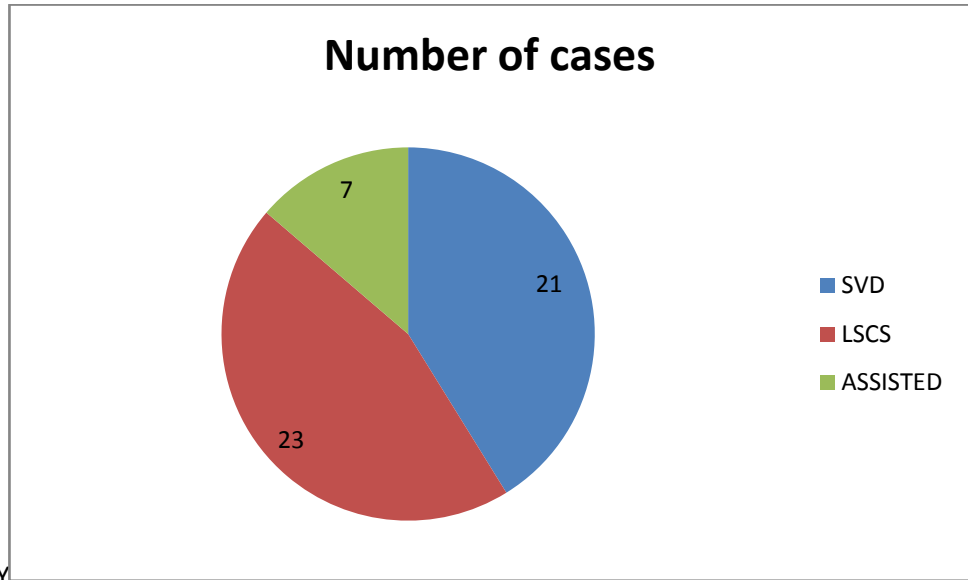
SAMPLE SIZE- All the patients diagnosed with eclampsia within 9 months.

TABLE-1)AGE DISTRIBUTION OF PATIENTS

AGE	No of patients	Percentage
Less than 20 years	12	21.42%
20-25 years	38	67.85%
More than 25 years.	6	10.71%

TABLE-2)GESTATIONAL AGE OF THE PATIENTS.

GESTAIONAL AGE	No of cases	Percentage
Less than 28 weeks	2	3.57%
29-32 weeks	8	14.29%
33-36 weeks	31	55.36%
More than 37 weeks	15	26.79%



MODE OF DELIVERY

TABLE 3) INDICATION OF C/S

POST C/S	2	8.69%
FETAL DISTRESS	7	30.43%
FAILED INDUCTION	5	21.74%
CPD	3	13.04%
UNFAVOURABLE CERVIX	6	26.09%

TYPE OF ECLAMPSIA

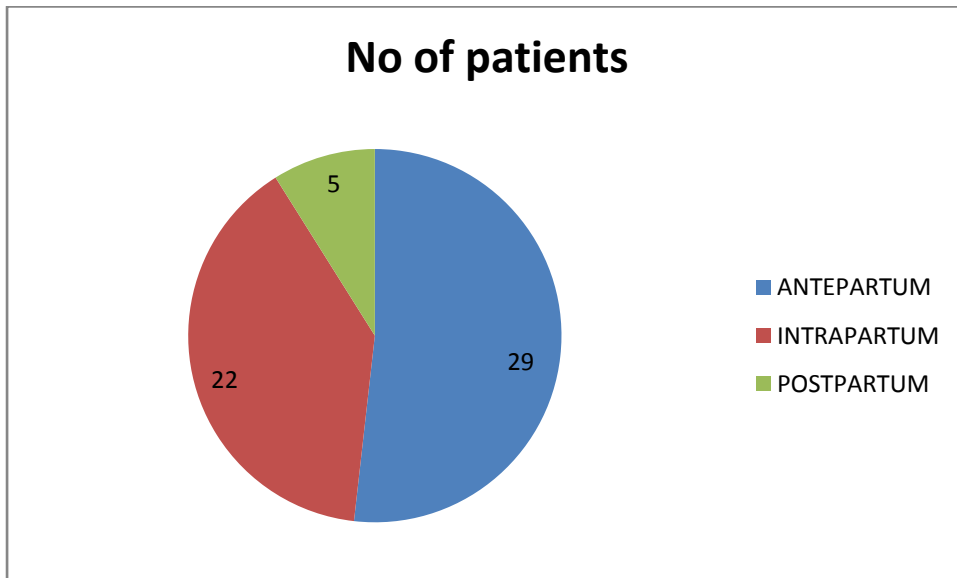


TABLE 4) DISTRIBUTION ACCORDING TO INVESTIGATIONS DONE

	LFT					
	SGPT>70 IU/L	38	67.76%			
	SGOT>70 IU/L	41	73.21%			
	LDH>600	48	85.71%			
	SERUM BILIRUBIN>1.2	38	67.78%			
	RFT					
	Blood urea>40	36	64.29%			
	Serum creatinine>0.8	34	60.71%			
	Serum uric acid >7	40	71.43%			
	Coagulation profile					
	Platelet count <1 lakh	24	42.86%			
	Derranged PTINR	48	85.71%			
	Peripheral blood smear showing hemolysis	12	21.43%			

TABLE 5.MATERNAL COMPLICATIONS

COMPLICATIONS	No of patients	Percentage
Abruptio placentae	9	16.07%
HELLP	5	8.93%
PPH	12	21.43%
DIC	2	3.57%
PULMONARY EDEMA	1	1.7%
RENAL DYSFUNCTION	4	7.1%
ARDS	1	1.7%

TABLE 6)PERINATAL OUTCOME

Die within 12 hours	IUFD	NICU ADMISSION	TERM	PRETERM	LOW BIRTH WEIGHT
5	3	26	15	38	24
8.93%	5.36%	46.43%	26.76%	67.86%	42.86%

TABLE 7) ACCORDING TO PARITY .

PARITY	NUMBER	PERCENTAGE
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PRIMIGRAVIDA	48	85.71%
MULTIGRAVIDA	8	14.28%

LIMITATIONS-

1. Less duration of study.
2. Limited sample size.

DISCUSSION –

In the present study majority of the women 67.85% are in the age group of 20-25 years, which is similar to the study conducted by Dalal et al¹⁰, where 56% of the patients were in the age group of 21-25 years, similar findings were observed in the study conducted by Verma et al¹¹, where majority of the women 46.15% were in the age group of 21-25 years. In the present study majority 66.07% of the patients were unbooked cases with irregular antenatal care similar to the study conducted by Ravi Kumar Shah, Sana Ansari et al where 84.09% of the cases are unbooked. Similarly results were observed in the study conducted by Jain et al and Swain et al where majority of the women 93.99% and 76.66% lack regular antenatal care. In our study majority of the patients belong to gestational age 33-36 weeks i.e 55.36%, followed by 26.79% more than 37 weeks which is similar to the study conducted by Aashika Shrestha, Junu Shrestha et al¹² where majority 68.18% belong to gestational 34-37 weeks. In our study majority of the patients 41.07% were delivered by LSCS similar to the study conducted by Ravi Kumar Shah, Sana Ansari, Rehana Mushtaq et al¹³ where majority of patients delivered by C section 63.31%, with most common indication being fetal distress 30.43%, followed by unfavourable cervix i.e 26.09%. In our study majority of the cases i.e 51.79% developed antepartum eclampsia, followed by intrapartum eclampsia 39.29%, 8.93% developed postpartum eclampsia similar to the study conducted by Ravi kumar Shah, Sana Ansari et al¹³ where 63.31% developed antepartum eclampsia. But in the study by Aashika Shrestha, Junu Shrestha et al¹² incidence of antepartum eclampsia is 50% and post partum eclampsia 50%. In our study majority of cases are primigravida 85.71%. In our study 75% are Hindu, 18.67% are Muslim. In our study 60.71% developed maternal complications, majority 21.43% developed PPH. There are 3 near miss cases in our study, two with DIC and one with ARDS. There is one maternal death in our study due to pulmonary edema. Maternal mortality in our study 1.7%. 46.63% of neonates were admitted in NICU. In the study conducted by Shrestha et al¹² 27% required NICU admission. Most of neonates were preterm 67.86%. 5.36% of intrauterine deaths are observed and 5 neonatal deaths seen. Neonatal mortality was 5.36%.

CONCLUSIONS-

Eclampsia still is a second leading cause of maternal death and remains an intractable obstetric emergency in the underprivileged world.

Studies show that young women who are pregnant for the first time and who receive inadequate antenatal care are the major contributors to the poor outcome of eclamptic women.

It is found that lack of antenatal care, poverty, illiteracy are need to be addressed to prevent these serious complications of pregnancy. Eclampsia basically is a preventable disease if the pregnant women get regular antenatal care and proper health education. Educating young women about the need of basic antenatal care, improving quality of service at primary health care level by educating all health care workers about the

importance of identifying high risk cases and close supervision of those cases and timely intervention and referral will help to improve the maternal and fetal outcome in eclampsia.

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2. ETHICAL CLEARANCE CERTIFICATE-



GOVT. OF ASSAM
OFFICE OF THE PRINCIPAL CUM CHIEF SUPERINTENDENT,
JORHAT MEDICAL COLLEGE & HOSPITAL, JORHAT, ASSAM
(UNDER SOCIETY FOR MEDICAL EDUCATION, JORHAT)

No. SMEJ/JMCH/MEU/841/Pt-2/2011/

Jorhat dated the 2nd of August, 2023

Communication of Decision of the Institutional Ethics Committee(IEC)

IEC(H) Reg.No. EC/NEW/INST/2020/1221		
Protocol title: FETOMATERNAL OUTCOME IN ECLAMPSIA IN A TERTIARY CARE CENTRE		
Principal Investigator: Dr. Hem Kanta Sarma, Professor & HOD, O&G, JMCH, Jorhat		
Co. Investigator/ Guide: Dr. Bhargav Chaliha, Assistant Professor, O&G, JMCH, Jorhat, Dr. Mezarine Kalita, PGT, O&G, JMCH, Jorhat		
Name & address of Institution: Jorhat Medical College & Hospital, Jail road, Jorhat-785001		
<input checked="" type="checkbox"/> New review	<input type="checkbox"/> Revised review	<input type="checkbox"/> Expedited review
Date of Review (D/M/Y): Date of previous review, if revised application		
Decision of IEC		
<input checked="" type="checkbox"/> Recommended/Approved	<input type="checkbox"/> Recommended with suggestions	
<input type="checkbox"/> Revision	<input type="checkbox"/> Rejected	
Suggestions/ Reasons/ Remarks: Suggestion: APPROVED		
Recommended for a period of: 1 year 6 month from the date of receipt of approval letter.		

Please note *

- Please submit all related documents of research.
- Inform IEC immediately in case of any adverse events.
- Inform IEC in case of any amendment of study protocol.
- This permission is only for period mentioned above.
- Annual report /study completion report are to be submitted to IEC(H).
- Member of IEC will monitor the Research Work with prior intimation.
- Recruitment of subjects to be done after due approval of IEC.
- Completion of the study to be intimated to IEC(H), JMCH.

Hem Kanta Sarma
Member Secretary
Institutional Ethics Committee (H),
Jorhat Medical College & Hospital, Jorhat

Institutional Ethics Committee (H)
Jorhat Medical College & Hospital, Jorhat