

MATERNAL AND PERINATAL OUTCOME IN ECLAMPSIA AT A TERTIARY CARE HOSPITAL IN TELANGANA- ACT EARLY, SCREEN EARLY

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Abstract

Background: The purpose of the study is to estimate the incidence, maternal and perinatal outcome in eclampsia patients and morbidity and mortality associated with it. **Materials and Methods:** It is Hospital based retrospective study in Government maternity hospital, for a period of one year at Department of Obstetrics and Gynaecology. **Result:** Majority of the patients were young, illiterate, unbooked primigravida with poor to average socioeconomic status from rural areas. In our study highest number of eclamptic cases 58 (72.4%) were of >37 weeks of gestational age. Antenatal blood pressure is >140/90 mmHg for 82.7% with no proteinuria. Occurrence of seizures is seen in 56.8% more if BP is >140/90 mmHg. Most of the women accounted for 42 (72.4%) cases delivered via caesarean section, for which indication is unfavourable cervix in 58.6%. 13.7 % of cases had maternal complications. 93% newborn did not need NICU admission and mothers improved with normal BP at the time of discharge. Most of the newborns are with appropriate for gestational age with one still birth and NICU admission was 55% with 1.7% mortality. **Conclusion:** Eclampsia is still an important obstetric emergency contributing to significant maternal and perinatal morbidity and mortality. Adequate antenatal visits, early recognition of the disease, timely referral to higher centers with sub-specialties, early initiation of treatment can improve maternal and perinatal morbidity and mortality to a significant extent.

INTRODUCTION

Pre-eclampsia when complicated with sudden onset of generalized tonic-clonic convulsions and or coma in pregnancy or postpartum unrelated to other cerebral conditions is called eclampsia. Approximately 1 in 2000 deliveries is complicated by eclampsia in developed countries, where the incidence in developing countries varies from 1 in 100 to 1 in 1700 cases. Maternal mortality in eclampsia is very high in India and varies from 2-30 %, much more in rural hospital based than in the urban counterpart. The perinatal mortality occurs in 5-12% cases. Eclampsia is the third commonest causes of maternal mortality, after hemorrhage and infection in the developing countries. Case fatality rate of eclampsia is 1.8% in developed countries, 4.092% in India. The only cure for eclampsia is delivery of the baby. The onset of eclamptic convulsions can be antepartum (38-53%), intrapartum (18-36%), or postpartum (11-44%).^[1] Wide difference in incidence of eclampsia has been observed between developing and developed countries.^[2] Majority of cases of eclampsia are young

primigravidae and unregistered. Preeclampsia can rapidly progress to eclampsia, especially if untreated.^[3] Though not all cases of eclampsia can be prevented, majority of cases can be prevented by early detection and effective treatment of preeclampsia, for which good antenatal services are needed. This study was done to analyze cases of eclampsia in relation to maternal and fetal outcomes at a tertiary level care hospital.

MATERIALS AND METHODS

It is Hospital based retrospective study in Government maternity hospital, Hanamkonda, Warangal from January 2020 – December 2020 in which 5603 patients attending as Outpatient at Department of Obstetrics and Gynecology.

Inclusion Criteria

Patient with antepartum, intrapartum and postpartum convulsions, all the obstetric cases who developed eclampsia during hospital stay or who were referred with eclampsia and all the newborns delivered to eclamptic mothers or admitted after delivery in cases of postpartum eclampsia.

Exclusion Criteria

Patient with convulsions due to causes other than eclampsia, with convulsions due to epilepsy, cerebral cause, malaria or any other metabolic cause were excluded from the study.

All data were entered in SPSS version 16 and were analyzed using simple descriptive statistics. Data were analyzed in terms of mean and percentage and presented in tables.

RESULTS

The majority of the patients were young, illiterate, unbooked primigravida with poor to average socioeconomic status from rural areas. In our study highest number of eclamptic cases 59 (74%) were of >37 weeks of gestational age. [Table 1]

In majority of cases antenatal blood pressure is >140/90 mmHg with 82.7% cases with no proteinuria. Occurrence of seizures is seen in 56.8% women if BP is >140/90 mmHg. [Table 2]

Majority of the women accounted for 42 (72.4%) cases delivered via caesarean section, for which indication is unfavorable cervix in 58.6%. 13.8 % of maternal complications are observed. [Table 3]

Unfavourable cervix is the most common cause for LSCS.(Figure-1)

13.8 % of maternal complications are observed in present study.(Figure-2)

93% newborn did not need NICU admission and mothers improved with normal BP at the time of discharge with 1.7% mortality. [Table 4]

Most of the newborns are with appropriate for gestational age with one still birth and NICU admission was 55%. [Table 5]

AGA(Appropriate for gestational age) are 74% and LBW (Low birth weight) are 26%.(Figure-3)

Table 1: Demographic variables in present study.

Variables		Frequency
Age Group (Years)	<20	6 (10.3%)
	20-30	46 (79.3%)
	>30	6 (10.3%)
Residence	Rural	45 (77%)
	Urban	13 (22.4%)
Socio-Economic Status	Poor	32 (55.1%)
	Average	20 (34.4%)
	High	6 (10.3%)
Education	Literate	9 (15.5%)
	Illiterate	49 (84.4%)
Booking	Booked	13 (22.4%)
	Unbooked	45 (77.5%)
Parity	Primigravida	32 (55.1%)
	G2-G4	20 (34.4%)
	>G5	6 (10.3%)
Gestational Age	24-30 Weeks	7 (12%)
	31-36 Weeks	10 (17.2%)
	37-40 Weeks	41 (70%)

Table 2: Antenatal parameters in present study

Variables		Frequency
Antenatal Blood Pressure (mm of Hg)	<140/90 (Normotensive)	10 (17.2%)
	>140/90 (Hypertensive)	48 (82.7%)
Antenatal Proteinuria	Present	12 (20.6%)
	Absent	46 (79.3%)
Occurrence of seizures	Antepartum	33 (56.8%)
	Intrapartum	3 (5.1%)
	Postpartum	22 (37.9%)
	Single	42 (72.4%)
	>Once	16 (27.5%)

Table 3: Maternal parameters in present study

Mode of Delivery	Number of patients	Percentages
SPVD	14	24.1%
LSCS	42	72.4%
Instrumental	2	3.4%
Indications of LSCS		
Unfavourable Cervix	34	58.6%
Failed Induction	20	34.5%
CPD	4	6.9%
Complications of eclampsia		
ARF	1	1.7%
HELLP	4	6.9%
Abruption	2	3.4%
PPH	1	1.7%

Pulmonary Edema	0	0
None	50	86.2%

Table 4: Maternal condition in present study

ICU admissions	Number of patients	Percentages
ICU admission	4	7%
no ICU admission	54	93%
Condition at the discharge		
Improved	57	98.2%
Mortality	1	1.8%
BP at the time of discharge		
Normal	55	94.8%
Abnormal	3	5.2%

Table 5: Perinatal Outcome in present study

Birth weight	Number of patients	Percentages
AGA(appropriate for gestational age)	43	74%
LBW	15	26%
Birth Status		
Live	32	43%
Stillbirth	1	2%
Birth Asphyxia	25	55%
NICU Admission		
Yes	32	55.1%
No	26	44.8%

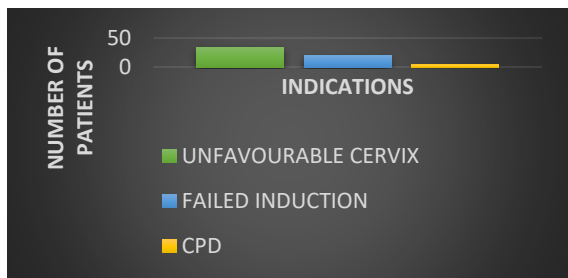


Figure-1: Indications of LSCS in present study

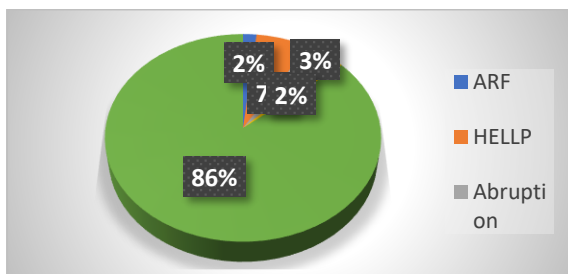


Figure-2: Complications of eclampsia in present study

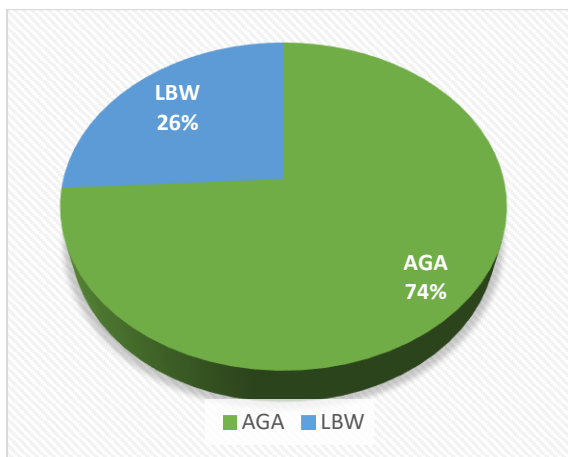


Figure-3: Perinatal outcome in present study

DISCUSSION

It was seen that in the present study, the incidence of eclampsia was found to be 0.01% of total deliveries studied. The result is comparable to studies conducted at other parts of Nepal by Chaudhary P and Ghimire S who reported hospital based incidence of eclampsia was 0.02% deliveries and 0.013 deliveries respectively.^[3,4]

These findings were much lower and in contrast with the studies from Tanzania, Nigeria, Eastern India, Uttar Pradesh, and Karnataka, where the incidence was reported to be 1.37%, 7.8%, 3.2%, 2.2%, and 1.82% by Ndaboine et al,^[5] in 2012, Efetie et al,^[6] in 2007, Kumar et al,^[7] in 2014 and Yaliwal et al,^[8] in 2011. Similar incidence was reported in India as well. The incidence of eclampsia was reported 10 per 1000 deliveries by Sunita TH. et al,^[9] and 5.8 per 1000 deliveries by Shamshad Begum Shaikh et al.^[10]

In the present study, majority of the patients belonged to 20-30 years of age group which was similar to other studies by Aabidha et al,^[11] Kannar et al,^[12] and Shakya et al.^[13] Similar findings were observed by Shaikh S B et al,^[10] and Acharya G et al.^[14]

Majority of the patients comprising of 32 (55.1%) were primigravidae from the rural area which was similar to a descriptive study at Vellore, India. In our study 33 (56.8%) cases were antepartum eclampsia. Gautam (Bhattarai) S K et al,^[15] found 61.3% of their study sample were primigravida.

Majority of the cases were unbooked 45 (77.5%) in present study. Duhan L. et al,^[16] found 96% of cases were unbooked. Haque H et al,^[17] showed 78% of women who developed eclampsia were unbooked that means they had not received antenatal check-up. In our study highest number of eclamptic cases 58 (72.4%) were of >37 weeks of gestational age. The definitive treatment of eclampsia is delivery,

irrespective of gestational age. Similar observation was noticed in other studies as well. Ghimire S,^[4] found in 83% of her 4 patients had antepartum eclampsia, P Chaudhary,^[16] found it in 370% of cases. This finding suggests importance of antenatal screening during pregnancy.

Lower segment caesarean section was the commonest mode of delivery for which indication is unfavourable cervix in our study 42 (72.4%) similar observation was found in the studies by Manjusha et al,^[18] and Chaudhary.^[16]

The percentage of live birth and birth asphyxia in our study was 32 (55.1%) and 25 (43.1%) which was similar to other studies. Many studies have suggested that there is higher risk of preterm delivery and low birth weight in eclampsia along with increased rate of foetal death.

In our study 1.8% is the mortality rate, studies reported 6% maternal mortality among 7 patients with eclampsia. Similar maternal outcome was mentioned by Sunita T.H,^[19] Ghimre S,^[2] and Shakya et al.^[13]

Maternal and foetal complications in eclampsia are notably high requiring management at tertiary care centre. There is an urgent need for proper antenatal care, intensive monitoring of women with eclampsia and timely hospitalization to improve both the maternal and foetal outcome.

CONCLUSION

This study reveals that majority of the patients were young, illiterate, unbooked primigravida with poor to average socioeconomic status from rural areas. Majority of the women accounted for 42 (72.4%) cases delivered via caesarean section for better neonatal outcome. Eclampsia is still an important obstetric emergency in our community contributing to significant maternal and perinatal morbidity and mortality. Adequate antenatal visits, early recognition of the disease, timely referral to higher centres with sub-specialities, early initiation of treatment can improve maternal and perinatal morbidity and mortality to a significant extent.

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