

## A Clinical Study on Perinatal Outcome in Eclampsia Patients Admitted at a Tertiary Referral Hospital

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### Abstract

### Original Research Article

Eclampsia is a life threatening condition which contributes significantly to maternal and perinatal mortality and morbidity. The following study was undertaken in Dept of Obstetrics and Gynaecology of a tertiary care centre in Assam with an aim to determine the perinatal outcome of eclampsia. It was seen that 68% delivered babies with weight between 2.1-3kg. Mean birth weight was 2.619 kg. Minimum birth weight was 700gms and maximum was 4 kg. We observed that out of 94 live babies, 19 had APGAR score of <5, 65 had between 6-8 and 10 babies had APGAR score >8.

**Keywords:** Clinical Study, Perinatal Outcome in Eclampsia, Tertiary Referral Hospital.

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## INTRODUCTION

Eclampsia is an acute and life-threatening complication of pregnancy characterised by the appearance of tonic-clonic convulsion with or without coma usually in a patient who has developed pre-eclampsia. It is an obstetric emergency associated with serious maternal and perinatal complications. Despite intensive research exact etiopathogenesis of eclampsia is not known yet. Defective placentation and endothelial dysfunction are considered to be the core features. In developed countries, its incidence is on declining trends but in developing the world, like India, it still remains the significant contributor to maternal morbidity and death. In the USA its incidence is 4.3/10,000 deliveries and in the UK it is 4.9/10,000 deliveries [1]. The incidence of eclampsia in India varies from 0.18 to 4.6% [2].

In developed world the incidence of eclampsia is on declining trend due to availability of adequate health care facilities to all pregnant women. Whereas in developing countries universal provision of antenatal care is still lacking.

Perinatal outcome is generally poorer compared to other patients. The common perinatal complications are prematurity, intrauterine death, intrapartum death, neonatal death, neonatal seizure, IUGR, sepsis, etc. Provision of timely and effective care to the women diagnosed with preeclampsia and

eclampsia is important for avoiding the majority of morbidity and mortality caused by this disorder. Hence there lies the importance of continued efforts in monitoring and reviewing the line of treatment and to analyze factors affecting the outcome.

## AIMS AND OBJECTIVES

- To determine the perinatal mortality rate associated with eclampsia in our institute.
- To study the risk factors, which affect perinatal outcome in cases of eclampsia?

## MATERIALS AND METHODS

A clinical study was undertaken in the Department of Obstetrics and Gynaecology in Gauhati Medical College and Hospital from January 2017 to December 2017. During this period, 100 pregnant patients with eclampsia were included in the study.

**Inclusion Criteria:** Patients with a tonic-clonic convulsion in the second half of pregnancy diagnosed to have eclampsia. **Exclusion Criteria:** Other causes of tonic-clonic convulsion with pregnancy like epilepsy, meningitis, cerebro-vascular accident. A thorough history was taken and examination of each patient was performed. All necessary investigations were sent.

Measurement of fetal outcome was done in terms of still birth rate, neonatal outcome, incidence of

low birth weight, APGAR score at birth, NICU admissions. Still birth was defined as new-born weighing  $\geq 500$  gm at birth without any sign of life.

## RESULTS

### Demographic analysis

Age Distribution In our study, most of the cases, i.e 43% belonged to the age group of 20-24

Low birth weight is defined as birth weight less than 2500 g (up to and including 2499 g).

years, 35% were of age group 25-29 years, 15% belonged to more than 29 years group and 7% belonged to group of 15-19 years. Mean age was 24.61 years. Minimum age was 18 years and maximum was 38 years.

**Table-1: Age distribution**

Age	15-19 yrs	20-24 yrs	25-29 yrs	>29 yrs
Percentage	7	43	35	15

Religion: In our study, 69% were Hindus and 31% were Muslims.

Place of living: It was seen that 82% of patients lived in rural areas while 18% lived in urban areas.

### OBSTETRIC ANALYSIS

Parity: It was found that 60% of the patients were primigravidas, 23% were second gravidas and 17% were third gravidas.

**Table-2: Association with parity**

Parity	Primigravida	Second gravida	Third gravid
Percentage	60	23	17

Duration of pregnancy: It was seen that 81% were term gestation, 13% were between 33-36 weeks, 5% were between 29-32 weeks and 1%

were between 25-28 weeks of gestation. Mean duration of gestation was 38.71 weeks.

**Table-3: Duration at which they presented**

Duration of pregnancy	25-28 weeks	29-32 weeks	33-36 weeks	>37 weeks
Percentage	1	5	13	81

Mode of delivery: It was observed that 32% had spontaneous delivery, 6% had instrumental delivery and 62% underwent LSCS.

**Table-4: Mode of delivery in these patients**

Mode of delivery	Spontaneous	Instrumental	LSCS
Percentage	32	6	62

### Perinatal outcome analysis

Weight of baby at term: It was seen that 68% delivered babies with weight between 2.1-3kg. Mean birth weight was 2.619 kg. Minimum birth weight was 700gms and maximum was 4 kg.

APGAR score at birth: We observed that out of 94 live babies, 19 had APGAR score of  $<5$ , 65 had between 6-8 and 10 babies had APGAR score  $>8$ .

**Table-5: APGAR score of babies**

APGAR Score	<5	6-8	>8
Percentage	19	65	10

Fetal Demise: It was seen that out of 100, 94 were live births, 2 patients already had intrauterine fetal death at admission and 4 had stillbirth.

**Table-6: Fetal outcome**

Outcome	Livebirth	IUFD	STILLBIRTH
Percentage	94	2	4

## Relationship of Proteinuria with Perinatal Mortality

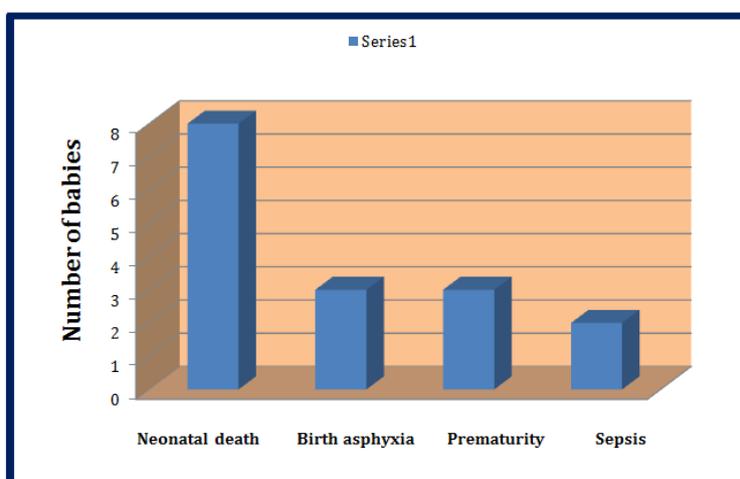
**Table-7: Relationship of Proteinuria with Perinatal Mortality**

Urine albumin	Total patient	Perinatal death	%
+4	56	9	16.07%
+3	20	4	20%
+2	14	1	7.14%
+1	10	0	0%

NICU admission: Total 16 babies admitted at NICU. Out of this 8 was neonatal death due to birth asphyxia-3, Prematurity-3 and sepsis-2.

**Table-8: Cause of neonatal death in NICU**

Neonatal death	Birth asphyxia	Prematurity	Sepsis
8	3	3	2



**Fig-1: Cause of neonatal death in NICU**

## DISCUSSION

1. In our study, most of the cases, i.e 43% belonged to the age group of 20-24 years. Verma *et al.* reported that maximum patients (46.15%) belonged to 21-25 years age group [1]. Kaur *et al.* also reported 20-25 years age group of 50% of their cases [2]. Yakasai *et al.* reported a mean age of 20.6 and SD of five years [3]. Our results were comparable with these studies.
2. Verma *et al.* reported 71.54% women delivered by vaginal route and 23.84% patient needed caesarean and 3.08% patient delivered by forceps. Khanum *et al.* showed a 25% caesarean rate, 71% normal vaginal delivery and 2% each of craniotomy and forceps delivery [4]. Arshad T reported a total of 37.5% LSCS deliveries, 25% by forceps, 37.5% by spontaneous vaginal delivery [5]. Our study reported higher rates of caesarean than all other studies.
3. There were 60.74% perinatal deaths due to eclampsia, 23.08% stillbirth and 14.62% were early neonatal death according to Verma *et al.* This was

quite higher compared to our study which reported only 14% perinatal mortality. Pannu *et al.* reported the incidence of still birth in the study group as 18.8% [6].

4. Majority of the cases (60%) were primigravidae, which is comparable to other studies [7, 8]. It indicates that primigravidae are the main victim for eclampsia. Out of 100 cases, 81 were full term delivery. This result is better than Raji C *et al.* [7], Sunitha *et al.* [9].

## CONCLUSION

Eclampsia still remains an intractable obstetrics emergency in the underprivileged world and a leading cause of maternal and perinatal death. Regular antenatal care, early recognition of high risk factors, timely treatment and early intervention in form of operative delivery by LSCS will help to reduce the burden of perinatal mortality. There is an urgent need for obstetricians to aim to improve maternal healthcare

services in order to reduce the burden of this dreaded disease named Eclampsia.

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