

# Outcome of eclampsia patients among obstetric admissions in a tertiary care hospital of Maharashtra

Dulewad Shirish<sup>1</sup>, Dinesh Wade<sup>2\*</sup>

<sup>1</sup>Associate Professor, <sup>2</sup>Resident, Department of Obstetric and Gynecology, Dr.S.C.G.M.C Vishnupuri, Nanded, Maharashtra, INDIA.  
Email: [sdulewad@gmail.com](mailto:sdulewad@gmail.com), [dr.dineshwade@gmail.com](mailto:dr.dineshwade@gmail.com)

## Abstract

**Background:** Eclampsia is a very serious complication of pregnancy and is one of the leading causes of maternal and perinatal morbidity and mortality worldwide more so in developing countries. **Objectives:** 1.To determine the incidence of eclampsia among the obstetric admissions of a tertiary care center. 2. To study the demographic profile of patients with eclampsia. 3. To study the maternal mortality and morbidity in eclampsia. **Methods:** The study was conducted on 100 cases of eclampsia which were admitted during period of November 2016 to August 2017. Patients who developed convulsions during pregnancy or post partum together with hypertension (Systolic BP>140, diastolic BP>90) and proteinuria (atleast+1) were enrolled in our study. **Results:** Among total number of deliveries during study period incidence of eclampsia was 3.2%. Out of 100 eclamptic patients 73% (73 cases) were primi gravidas 27 % were multigravidas. 53% (53 cases) had intrapartum eclampsia. 36 cases suffered from major and minor complications of which three died

**Key Words:** Eclampsia, obstetric admissions.

## \*Address for Correspondence:

Dr. Dulewad Shirish, Associate Professor, Department of Obstetrics and Gynecology, Dr.S.C.G.M.C Vishnupuri, Nanded, Maharashtra, INDIA.

Email: [sdulewad@gmail.com](mailto:sdulewad@gmail.com)

Received Date: 19/10/2017 Revised Date: 17/11/2017 Accepted Date: 03/12/2017

DOI: <https://doi.org/10.26611/1012436>

## Access this article online

Quick Response Code:



Website:  
[www.medpulse.in](http://www.medpulse.in)

Accessed Date:  
28 December 2017

## INTRODUCTION

Pregnancy, although considered a physiological state, carries risk of serious maternal morbidity and mortality. Eclampsia is a very serious complication of pregnancy responsible for high maternal and perinatal mortality, long term disability and death among both mothers and their babies. Eclampsia is an acute and life-threatening complication of pregnancy characterized by the appearance of tonic clonic seizures (convulsions), usually in a woman who has developed pre-eclampsia. Eclampsia includes convulsions and coma that happen during pregnancy but are not due to pre-existing or organic brain

disorder. Eclampsia related complications include CVA (cerebro vascular accident), pulmonary oedema, renal failure, HELLP (haemolysis, elevated liver enzyme, and low platelet count) syndrome, DIC (Disseminated Intravascular Coagulation) and hepatic failure<sup>1</sup>. Eclampsia is very serious complication and one of the top five direct causes of maternal and infant adverse outcome<sup>2,3</sup>.

## MATERIALS AND METHODS

The present prospective study was carried out on 100 cases of eclampsia among total 3116 deliveries during study period November 2016 to August 2017 in Dr. Shankarrao Chavan Government Medical college, Vishnupuri, Nanded. The cases were women with blood pressure  $\geq 140$  mmHg systolic or  $\geq 90$  mmHg diastolic on two separate readings taken at least four hours apart with previously normal blood pressure and when proteinuria is greater than or equal to dipstick reading of 1+ after 28 weeks' gestation (4). The diagnosis involves history taking, physical examination and laboratory test. Data was entered in excel 2011 and analyzed by SPSS Ver.20.

## RESULTS

100 cases of eclampsia among total 3116 deliveries were admitted during study period November 2016 to August 2017. Most of these cases were referred from rural hospital, primary health care centres, a few were also referred from private practitioners or got admitted without any referral. The following observations were made in present study.

**Incidence:** Total number of deliveries during the study period of November 2016 to August 2017 were 3116. In all, 100 patients of eclampsia were admitted during this period. The incidence of eclampsia was 3.2%.

**Table 1:** Maternal age Distribution of eclamptic patient

Sr. No.	Age in year	No. of Cases	Percentage%
1	≤20	45	45%
2	21-25	40	40%
3	26-30	5	5%
4	≥31	5	5%
<b>Total</b>		<b>100</b>	<b>100%</b>

Among 100 cases, 45% of the patients were less than or equal to 20 years of age followed by 21-25 age group which consisted of 40 %. Amongst cases mean age found to be 22.18 years

**Table 2:** Distribution of patients according to parity

Parity	No of cases	Percentage%
Primi	73	73 %
Ilnd Gravida	02	02 %
Multigravida	25	25 %
<b>Total</b>	<b>100</b>	<b>100%</b>

Above table shows that in our study most of the patients i.e. 73 % of the cases were primigravidas.

**Table 3:** Distribution of patients according to Residence

Residence	No. of cases	Percentage%
Urban	30	30%
Rural	70	70%
<b>Total</b>	<b>100</b>	<b>100%</b>

30 women (30 %) were from urban area while most of the patients 70 (70 %) were rural by residence.

**Table 4:** Distribution of patients according to type of eclampsia

Type of eclampsia	No. of cases	Percentage%
Antepartum	34	34%
Intrapartum	53	53%
Postpartum	13	13
<b>Total</b>	<b>76</b>	<b>100%</b>

Maximum (53%) patients had intrapartum eclampsia, followed by 34 % Antepartum and 13% post-partum eclampsia

**Table 5:** Distribution of patients according to premonitory symptoms on admission

Symptoms	No. of cases*	Percentage%
Oedema	98	98
Headache	93	93
Vomiting	49	49
Visual disturbance	36	36
Epigastric pain	17	17
Oliguria	04	04
APH	01	01

\*Multiple responses

Most common symptom preceding the onset of convulsion was headache experienced by 93 % of women. Vomiting was reported by 49 % of women and visual disturbances by 36%

**Table 6:** Maternal mortality among study subjects

	01	02	03
Type of eclampsia	Antepartum	Antepartum	antepartum
Gestational Age	30 weeks	38 weeks	39 wk
Total no. of convulsion	>12	>24	
Blood pressure	140/110	180/130	
Mode of delivery	Vaginal	LSCS	vaginal
Convulsion delivery interval	62 hrs	14 hrs	6 hr
Admission death interval	20 hrs	5 day	12 hr
Cause of death	Intracerebral Haemorrhage+ Pulmonary edema	Intracerebral Haemorrhage with circulatory collapse with respiratory distress due to massive laryngeal oedema	Intracerebral Haemorrhage with HELLP syndrome with hypovolumic shock

Above table describe the mortality profile of 3 patients who died due to complications of eclampsia. Case fatality rate was 3%

**Table 7:** Maternal morbidity among eclamptic patients

Complications	No of cases	Percentage
Infections		
Aspiration Pneumonia	04	11.1%
Febrile morbidity	06	16.6%
Renal – transient oliguria	06	16.6%
Blurring of vision	02	5.5%
Psychosis	01	2.7%
Haemorrhage		
Atonic PPH	08	22.2%
Coagulation failure	01	2.7%
APH	02	5.5%
Cerebrovascular accident	04	11.1%
Pulmonary oedema	02	5.5%
<b>Total</b>	<b>36</b>	<b>100%</b>

Six patient exhibited transient oliguria which responded to treatment and urine output improved after delivery. Out

of 100 patient 32 patient required caesarean section among which 8 patient had atonic PPH. Out of these 8 patient 4 patient required uterine massage only but remaining 4 patient needed internal iliac ligation with b lynch suture and Post operative period was uneventful for them with no mortality.

## DISCUSSION

Early detection of pre-eclampsia and prompt efforts to prevent convulsions could reduce the incidence of this dreaded complication. Unfortunately, inspite of the implimentation of safe motherhood programme the number of patients admitted with eclampsia in tertiary care centres in India has not shown an expected decline. In the present study 100 mothers were admitted with eclampsia during the study period giving an incidence of 3.2% which is similar to the reports from most leading centres in India (0.7% - 2.2% P. Bhattacharya *et al* (1992) and Swain *et al* (1993) respectively)<sup>5,6</sup>. In the present study 45% of the women with eclampsia were in the age group of <20 years. The mean age was 22.18 years. Biren Shah (1993) has reported 38.73% of his patients to be less than 20 years<sup>7</sup>. Bhaskar *et al* (1996) in his study quotes the mean age to be 21.28 years<sup>8</sup>. Early marriages and teenage pregnancies still prevalent in Indian setting appear to be contributing to the high incidence of eclampsia. 73 % of our patients were primigravidae which is similar to the observation by Sandhu *et al* (1993) and Nawani *et al* (1996) (70% and 73.3% respectively)<sup>9,10</sup>. However, nearly 27% of eclamptic mothers have been multiparous. Hence equal emphasis needs to be given on record of blood pressure and detection of proteinuria in multiparous women as well. 70 % of patients in the present study were referred from rural areas. Majority of patients had sought help from peripheral health care units or from nearby physician before arriving to the institution. However, 38% of patients arrived without receiving any pre-referral treatment. This indicates a need for educating the family physicians in appropriate referrals. In the present study 34 % of women had antepartum eclampsia, 53% intrapartum and 13 % had post partum eclampsia. The other studies quote the incidence as: Sarodey C and Kazi Y(1990)-antepartum eclampsia in 60%, 20.4% intrapartum and 19.04% had post partum eclampsia<sup>11</sup>. Konje (1992)-antepartum eclampsia in 31%, 46.2% intrapartum and 23.20% had post partum eclampsia<sup>12</sup>. The symptoms commonly seen preceding the onset of convulsions were oedema 98%, headache in 93%, vomiting in 49% and visual disturbances in 36% of women. Thus, the occurrence of the symptoms like headache, vomiting, visual disturbances, epigastric pain, oliguria help one to anticipate the occurrence of fits and take appropriate

measures to prevent fits accordingly. In the present study, amongst 100 cases there were 3 maternal deaths giving a case fatality rate of 3% of these one patient was brought in moribund state. Cerebral haemorrhage had caused death in 2 patients. One patient expired due to HELLP syndrome with hypovolumic shock. The maternal mortality reported by Bichile *et al* due to preeclampsia-eclampsia was 39.6%<sup>13</sup>. Thus a decline in maternal mortality has been observed over years. The analysis of case records of both maternal deaths in the present study reveals that the mothers are often brought to the institution very late with multiple convulsions in a moribund state. Out of total 100 cases 36 women were observed to have some medical or obstetrical complication (36 %). Coagulation failure Was seen in 1 and transient oliguria in 6 patients. Intracerebral haemorrhage was seen in 4 patients, 2 of them died. No One developed hemiplegia. Aspiration pneumonia was seen in 4 (11.1%) patients and 6 patients had febrile morbidity. Two patient had pulmonary oedema out of which one patient responded to treatment and other one died. 4 patient had cerebrovascular accident out htem 3 were needed intubation and among them only one patient extubated successfully and rest two patient had death. ne of our patients developed postpartum psychosis which was treated after psychiatric consultation. Desai P (1996) in his study quoted intracranial haemorrhage in 2.96% of women and paresis 33%, renal failure in 0.44%, pulmonary oedema in 1.48% and hepatic involvement in 0.49% of cases<sup>14</sup>. Agustine *et al* (1997) reported acute renal failure was the commonest complication<sup>15</sup>. Intracerebral haemorrhage was the most common cause of death in complicated eclampsia group. Amongst obstetrical complications, eight of our patients had atonic PPH which was managed well with no mortality

## CONCLUSION

Eclampsia is the leading cause of maternal and fetal mortality. High maternal morbidity and mortality has been attributed to the late referral, delay in the timely management of preeclampsia. So coordinated efforts of medical and para medical staffs and health education is needed to fight against eclampsia. For early diagnosis of risk factor all ANC should get registered at available health centre and routine ANC visit specially in third trimester is more meaning full. Community awareness needs to be created regarding importance of regular ANC and the danger signals in pregnancy for seeking urgent medical help eclampsia is a reflection of poverty illiteracy and lack of awareness. So to avert the maternal death due to eclampsia we have to improve our existing health care facility at the same time awareness, female literacy have to be increased to avail the existing health care facility.

## REFERENCES

1. Micheal BB. Eclampsia. Emer Med J, 2000; 74: 1-10.
2. American College of Obstetricians and Gynecologists. Hypertension in Pregnancy, Task force on hypertension in pregnancy. Obstet Gynecol. 2013; 122(5):1122–31.
3. Green P. Update in the Diagnosis and Management of Hypertensive Disorders in Pregnancy. Michigan: Wayne State University School of Medicine; 2014
4. American College of Obstetricians and Gynecologists. Hypertension in Pregnancy, Task force on hypertension in pregnancy. Obstet Gynecol. 2013; 122(5):1122–31
5. Bhattacharya PK, Purkayastha S, Basu M, Mondal R: caesarean section in eclampsia- still a dilemma. Journal of Obstetrics and gynecology of India, Vol. 42:343-348, 1992.
6. Swain S, Ojha KN, Prakash A, Bhatia BD: Maternal and perinatal mortality due to eclampsia. Indian Pediatrics: Vol.30: 771-773, June 1993.
7. Biren shah, M. Dandekar: eclampsia- A peripheral hospital experience. Journal of Obstetrics and gynecology of India, Vol. 43:42-44, 1993
8. Bhaskar Pal, Geeta Niyogi, Vivek Patkar: A study of Eclampsia. Journal of Obstetrics and gynecology of India, Vol. 44(1):34-39, 1996.
9. Sandhu SK, Bakshi P, Sandhu H: Maternal and Perinatal outcome in eclampsia using lytic cocktail and parenteral magnesium sulphate. Journal of Obstetrics and gynecology of India, Vol. 43(3):359-363, 1993.
10. Nawani M, Nawani DP, Pandey K, Agarwal P: A comparative evaluation of various anticonvulsant regimes in eclampsia. Journal of Obstetrics and gynecology of India, Vol. 46(1):26-29, 1996.
11. Sarodey C, Kazi Y: Magnesium sulphate regimen in Eclampsia. Journal of Obstetrics and gynecology of India, Vol. 40(5):671-674, 1990
12. Konje JC, Obiseson KA, Odukoya OA, Ladipo OA: Presentation and Management of Eclampsia. Int J Gynaec Obst: 38(1):31-35, May 1992.
13. Bichile Lk, DB Dumir, CH Sathe: Obstetric problems in rural area. Journal of Obstetrics and gynecology of India, Vol. 34:109-112, 1984.
14. Desai P, Badheka H, Barbhaiya M, Desai M, Mody D: Effect of Magnesium sulphate in changing the maternal outcome associated with eclampsia. Journal of Obstetrics and gynecology of India, Vol. 46(1):20-25, 1996
15. Augustine Conde- Agudelo, Anac, Kafury Goeta: Case control study of risk factors for complicated eclampsia. Journal of Obstetrics and gynecology, 90:172-175, August 1997

Source of Support: None Declared  
Conflict of Interest: None Declared