

# FREQUENCY AND OUTCOME OF ECLAMPSIA

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## ABSTRACT

**Background:** Eclampsia is an acute obstetric emergency carrying very high maternal morbidity and mortality risk. The objective of the study was to determine the frequency and maternal outcome of eclampsia.

**Material & Methods:** This cross-sectional study was conducted in the Department of Obstetrics and Gynecology, unit II, Liaquat University Hospital, Jamshoro/Hydrabad. from 1<sup>st</sup> January 2015 to 31<sup>st</sup> December 2015. A sample size of 188 was selected through non-probability, consecutive technique. All patients admitted as cases of eclampsia or who develop eclamptic convulsions after admissions in hospital whether antepartum, intrapartum or postpartum were included. Patients with hypertensive disorders during pregnancy who did not develop eclamptic convulsions or patients with seizures due to epilepsy or other disorders were excluded. Demographic variables were; age, parity, antenatal care received or not and research variable was maternal outcome in terms of discharged alive or expired. Case fatality rate was calculated. Data was entered on a pre-designed proforma. Age was numeric while all others were categorical variables. Frequency and percentages were calculated for categorical variables whereas mean and standard deviation for numeric variable. Descriptive statistical analysis was done.

**RESULTS:** There were 4979 obstetric admissions, with 4120 deliveries. A total of 188 patients were admitted as cases of eclampsia constituting 3.78% of obstetric admissions. Mean age of patients was 23±3.10 years. One hundred and forty seven (78%) were primigravida and 41 (22%) were multigravidas. Ante natal care was 43 (23%), and majority of women first time came to know about their raised blood pressure after admission. Maternal outcome was 37 (20%) patients expired and 151 (80%) patients survived and discharged home. Out of total of 111 maternal deaths during the study period due to complications of eclampsia mainly pulmonary edema (66%), the case fatality rate was 19.68 %.

**CONCLUSION:** Eclampsia is a serious, common condition associated with significant maternal morbidity and mortality. Frequency of eclampsia is common in young and primigravida having lack of ante natal care..

**KEY WORDS:** Eclampsia; Pathogenesis; Strategies; Genetics; Environmental; Disease.

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## INTRODUCTION

Every year approximately 8 million women suffer from pregnancy related complications and over half a million of them die due to these complications. The threat of morbidity and mortality is greater for poor women in developing countries. The ratio of deaths due to pregnancy related complications in developing countries and developed countries is 1:11 and 1:500 respectively.<sup>1</sup> The reasons for these

deaths are hemorrhage, hypertension, sepsis, abortion and embolism. It is a fact that 80% of maternal deaths are preventable through different strategies if these strategies are adopted by developing countries. Developing regions account for approximately 99% of the global maternal deaths in 2015, with sub-Saharan Africa alone accounting for roughly 66% followed by Southern Asia 47%.<sup>2,3</sup>

Hypertensive disorders account for 2<sup>nd</sup> most common cause of direct maternal deaths. The incidence of hypertensive disorders is rising globally.<sup>4,5</sup> Eclampsia is a form of hypertensive disorder of pregnancy characterized by occurrence of tonic-clonic convulsions in patient having hypertension and proteinuria, however 20% of eclamptics are normotensive and non proteinuric.<sup>6</sup>

Eclampsia is an acute obstetric emergency with high case fatality rate. Industrialized nations have been successful in reducing both the incidence of

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eclampsia and associated mortality by 90% using increased access to hospital care, focused antenatal care, early detection, and timely intervention including early delivery.<sup>7-11</sup>

Eclampsia is an acute obstetric emergency carrying very high maternal morbidity and mortality risk. Worldwide, several initiatives have been taken and still work is going on for reduction of maternal morbidity and mortality. One of the eight Millennium Development Goals (MDGs) was to reduce maternal mortality by three quarters from year 1990 to 2015. Though Countries have made some progress in reduction of maternal mortality however the goals were not achieved by year 2015, while increased rates of decline in maternal mortality were obtained from the year 2000 onwards, hence united nations have decided to carry on the work, under the umbrella term of sustainable development goals in a summit on 25 September 2015.<sup>12</sup> The aim is to achieve reduction of global maternal mortality ratio to less than 70 per 100,000 live births by the year 2030 and the efforts such as safe motherhood initiative and WHO'S making pregnancy safer strategies have been supporting worldwide programs on reduction of maternal mortality. Despite of all these efforts, thousands of women are dying due to pregnancy related complications.<sup>13</sup> The objective of the study was to determin the frequency and maternal outcome of eclampsia.

## MATERIAL AND METHODS

This cross-sectional study was conducted in the Department of Obstetrics and Gynecology, unit II, Liaquat University Hospital, Jamshoro/Hydrabad. from 1<sup>st</sup> January 2015 to 31<sup>st</sup> December 2015. A sample size of 188 was selected through non-probability, consecutive technique. All patients admitted as cases of eclampsia or who develop eclamptic convulsions after admissions in hospital whether antepartum, intrapartum or postpartum were included. Patients with hypertensive disorders during pregnancy who did not develop eclamptic convulsions or patients with seizures due to epilepsy or other disorders were excluded. Diagnosis of eclampsia was made on history of seizures and high blood pressure, with clinical findings of hypertension and proteinuria. Informed consent from patients or close relative of patients was taken and ethical considerations were ensured. Demographic variables were; age, parity in terms of primi and multigravida, antenatal care received or not and research variable was maternal outcome in terms of discharged alive or expired. Case fatality rate was calculated. Data was entered on a pre-designed proforma. Age was numeric while all others were categorical variables. Frequency and percentages were calculated for categorical variables whereas mean and standered deviation for numeric variable. Descriptive statistical analysis was done.

## RESULTS

There were 4979 obstetric admissions, with 4120 deliveries. A total of 188 patients were admitted as cases of eclampsia constituting 3.78% of obstetric admissions. Mean age of patients was  $23 \pm 3.10$  years. one hundred and forty seven (78%) were primigravida and 41 (22%) were multigravidas. Ante natal care was 43 (23%), and majority of women first time came to know about their raised blood pressure after admission. Maternal outcome was 37 (20%) patients expired and 151 (80%) patients survived and discharged home. Out of total of 111 maternal deaths during the study period due to complications of eclampsia mainly pulmonary edema (66%), the case fatality rate was 19.68 %. (Table 1).

**Table 1: descriptive analysis of pre-eclampsia (n=188)**

S.No.	Variables	attributes	Frequency	%ages
1	Parity	Primigravida	147	78
		multi-gravida	41	22
2	Ante natal care	Yes	43	23
		No	145	77
3	Maternal out come	Expired	37	20
		survived	151	80

## DISCUSSION

The frequency of eclampsia is found to be 3.78% which is quiet high and may be because of tertiary referral center. The results are comparable to studies done by Jido.<sup>14</sup> and Sultana.<sup>15</sup>

Mean age of the patients was  $23 \pm 3.10$  years of age and ante natal care, also found in studies done by Qureshi,<sup>16</sup> and Yakasai.<sup>17</sup> This highlights the need to work on pillars of safe motherhood that are family planning, antenatal care and emergency obstetric care. The case fatality rate was quiet high as compared to study by Jido<sup>14</sup> however, similar to the study by Kullima,<sup>18</sup> with main cause of death being pulmonary edema. In a study conducted by Chhabra<sup>19</sup> on patients with eclampsia, the leading cause of death was found to be pulmonary edema followed by renal failure and abruption placentae.<sup>19</sup> This emphasizes the need of strengthening intensive care units in referral hospitals managing high risk pregnancies, training of ICU team in fluid management, central venous line insertion and monitoring multidisciplinary input.

## CONCLUSION

Eclampsia is a serious, common condition associated with significant maternal morbidity and mortality. Frequency of eclampsia is common in young and primigravada having lack of ante natal care.

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### CONFLICT OF INTEREST

Authors declare no conflict of interest.  
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### AUTHORS' CONTRIBUTION

Conception and Design:	NHS, SB, FH, SBA, HU
Data collection, analysis & interpretation:	NHS, SB, NR , FH
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