

Fetomaternal Outcome of Eclamptic Patient in Secondary Health Care Level-3 years study

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ABSTRACT

Background: Eclampsia is defined as the development of seizures that cannot be attributed to other causes and /or unexplained coma during pregnancy or puerperium in a woman with pre-eclampsia. The purpose of this hospital based observational study is to evaluate the extent of the problem and to estimate the associate of foetal and maternal complications

Methodology: The observational study was carried out Department of Obstetrics and Gynaecology in 250 bedded general Hospital Tangail from January 2015 to November 2017. All on the diagnosed patients of eclampsia were included in this study.

Results: Regarding types of eclampsia 187(62.3%) patients had antepartum eclampsia, 78(26.0%) had postpartum eclampsia and 35(11.7%) had intrapartum eclampsia. Majority (57.0%) patients had 5-9 times of convulsion, 65(21.7%) had >10 times and 64(21.3%) had <5 times of convulsion. Most (95.0%) patients had cesarean section and 15(5.0%) had normal vaginal delivery (NVD). Maternal alive was found 293(97.7%) and death was 7(2.3%). Male baby was found 203(67.7%) and female baby was 97(32.3%). More than three fourth (75.7%) babies had weight 2.5-4.0 kg. Alive babies were found 282(94.0%), neonatal death was 8(2.7%) and intrauterine death was 10(3.3%).

Conclusion: Improving ante-natal and emergency obstetric and neonatal care is mandatory to improve the outcome.

Key words: Eclampsia, Fetomaternal Outcome,

Introduction

Eclampsia is defined as the development of seizures that cannot be attributed to other causes and /or unexplained coma during pregnancy or puerperium in a woman with pre-eclampsia.¹ The incidence of eclampsia and its complication is high. It is one of the leading causes of maternal mortality in Bangladesh accounting about 20%. This is also associated with poor perinatal outcome.² Eclampsia is a preventable and treatable cause of maternal morbidity and mortality with poor feto-maternal outcome in developing countries. The delay in early recognition of the problem, transportation to proper

health facility and getting proper expert care are major hurdles to reduce complications.³ This is possible with improvement of prenatal care at all levels and proper timely management. Prevalence and complications with regard to maternal and foetal morbidity has reduced to a great extent in developed countries which is clearly understood from above mentioned statistics. This is due to good prenatal care.⁴ The purpose of this hospital based observational study is to evaluate the extent of the problem and to estimate the associate of foetal and maternal complications.

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Methods

The observational study was carried out Department of Obstetrics and Gynaecology in 250 bedded general Hospital Tangail from January 2015 to November 2017. All on the diagnosed patients of eclampsia were included in this study. Age of patients, parity, type of eclampsia, gestational age, mode of delivery, maternal and fetal outcome were noted from medical records of patients. Patients with diagnosis of convulsion and coma of other causes were excluded. All patients of eclampsia were followed up thoroughly from admission to discharge. All data were entered in SPSS 23 and also analyzed through it.

Results

Table I shows majority (63.3%) patients belonged to age 21-30 years. The mean age was found 24.6 ± 5.3 years. Majority (71.0%) patients came from rural area. Most of the patients completed SSC education level (29.0%). Almost three fourth (74.3%) patients came from lower class family. Primipara was found 133(44.2%) and multipara was 167(55.7%). Table II shows majority (60.3%) patients were term pregnancy (≥ 37 weeks of gestational age) and 119(37.9%) were preterm pregnancy (< 37 weeks of gestational age). Table III shows 177(59.0%) not received antenatal check up, 101(33.7%) taken irregular check up and 22(7.3%) taken regular check up. Table IV shows more than half (52.0%) patients had interval between attack & admission after 6 hour, 115(38.3%) between 1-6 hour and 29(9.7%) within 1 hour. Table V shows 187(62.3%) patients had antepartum eclampsia, 78(26.0%) had postpartum eclampsia and 35(11.7%) had intrapartum eclampsia. Table VI shows majority (57.0%) patients had 5-9 times of convulsion, 65(21.7%) had > 10 times and 64(21.3%) had < 5 times of convulsion. Table VII shows majority (95.0%) patients had cesarean section and 15(5.0%) had normal vaginal delivery (NVD). Table VIII shows maternal alive was found 293(97.7%) and death was 7(2.3%). Table IX shows male baby was found 203(67.7%) and female baby was 97(32.3%). More than three fourth (75.7%) babies had weight 2.5-4.0 kg. Alive babies were found 282(94.0%), neonatal death was 8(2.7%) and intrauterine death was 10(3.3%).

Table I: Socio-demographic status of the patients (n=300)

Socio-demographic status □	Frequency□	Percentage
Age (years)		
<20 □	53 □	17.7
21-30 □	190 □	63.3
31-40 □	57 □	19.0
Mean \pm SD □	24.6 \pm 5.3	
Residence		
Rural □	213 □	71.0
Urban □	87 □	29.0
Educational status		
Illiterate □	33 □	11.0
Primary □	65 □	21.7
SSC □	87 □	29.0
HSC □	75 □	25.0
Degree or above □	40 □	13.3
Socioeconomic status		
Lower class □	223 □	74.3
Lower middle class □	63 □	21.0
Upper middle class □	14 □	4.7
Parity		
Primipara □	133 □	44.2
Multipara □	167 □	55.7

Table II: Distribution of study patients by gestational age (n=300)

Gestational age (weeks) □	Frequency □	Percentage
< 37 □	119 □	39.7
≥ 37 □	181 □	60.3

Table III: Distribution of study patients by antenatal check up (n=300)

Antenatal check up □	Frequency □	Percentage
No check up □	177 □	59.0
Irregular check up □	101 □	33.7
Regular check up □	22 □	7.3

Table IV: Time interval between attack & admission of the patients (n=300)

Time □	Frequency □	Percentage
Within 1 hour □	29 □	9.7
Between 1-6 hour □	115 □	38.3
After 6 hour □	156 □	52.0

Table V: Distribution of study patients by types of eclampsia (n=300)

Types of eclampsia □	Frequency □	Percentage
Antepartum □	187 □	62.3
Intrapartum □	35 □	11.7
Postpartum □	78 □	26.0

Table VI: Distribution of study patients by number of convulsion (n=300)

Number of convulsion □	Frequency □	Percentage
> 10 □	65 □	21.7
5-9 □	171 □	57.0
< 5 □	64 □	21.3

Table VII: Distribution of study patients by mode of delivery (n=300)

Mode of delivery □	Frequency □	Percentage
NVD □	15 □	5.0
Caesarean section □	285 □	95.0

Table VIII: Distribution of study patients by maternal outcome (n=300)

Maternal outcome □	Frequency □	Percentage
Alive □	293 □	97.7
Death □	7 □	2.3

Table IX: Distribution of study patients by perinatal outcome (n=300)

Perinatal outcome	Frequency	Percentage
Sex		
Male □	203 □	67.7
Female □	97 □	32.3
Weight (kg)		
< 2.5 □	73 □	24.3
2.5-4.0 □	227 □	75.7
Alive □		
Neonatal death □	8 □	2.7
Intrauterine death □	10 □	3.3

Discussion

In this study observed that the majority (63.3%) patients belonged to age 21-30 years. The mean age was found 24.6 ± 5.3 years. Majority (71.0%) patients came from rural area. Most of the patients completed SSC education level (29.0%). Almost three fourth (74.3%) patients came from lower class family. Primipara was found 133(44.2%) and multipara was 167(55.7%). Similar observation was found Shahzad *et al.*⁵ they showed the mean age of

patients was 25.17 ± 4.9 years ranging from 18 to 40 years. The maximum number of patients (58%) was between 20-25 years, while (26%) were having age of 26-30 years. Age of 7% patients was less than 20 years and only 9% were between 31-40 years. In current study most of the cases (63%) were primigravidae, 28% had parity in the range of 2-4, while 6% were P5 - P7 and only 3% had a parity of more than 7. Raji *et al.*⁶ reported that the maximum number of cases 115 (78.8%) were in the age group between 20-25 years, while 22 (15.1%) were having age of < 19 years, 6 (4%) were in the age group between 25- 30 years and 3 (2%) were in the age between 31-40 years. Most of the cases 101 (69.2%) were primigravidae, 40 (27.4%) had parity in the range of 2-4, while 5 (3.4%) had parity between P5 and P6. Nessa *et al.*² also observed that 19(54.28%) cases were in between age of 21 to 30 years, while 12(34.28%) were less than 21 years and 4(11.42%) were more than 30 years. Majority (60%) were nulliparous, while 40% were multiparous. Ghimire³ study showed forty one percent were of <19 years of age and majority were young (78%) of less than 24 years. Most (64%) were primiparas followed by multiparas (33.9%).

In present study the majority (60.3%) patients were term pregnancy (≥ 37 weeks of gestational age) and 119(37.9%) were preterm pregnancy (<37 weeks of gestational age). Similar observation was found different studies, in study of Nessa *et al.*² found most (62.85%) of the cases delivered preterm and 37.14% at term. Raji *et al.*⁶ It was observed that 44 (37.6%) cases presented at gestational age of 31-36 weeks, while 63 (53.85%) had gestational age of 37-40 weeks. Those who were at 24-30 weeks of gestation constituted 10 (8.55%). Shahzad *et al.*⁵ observed that 39% of the patients presented at gestational age of 31-36 weeks, while 39% had gestational age of 37 weeks or above. Those who were at 24-30 weeks of gestation constituted 22% mean gestational age was 33.7 ± 4.28 weeks. Ghimire³ study revealed eclamptic fits were more common (41.6%) in 37-40 weeks period of gestation (POG) followed by (36.6%) 34-37 weeks of POG.

Regarding antenatal check majority 177(59.0%) not received antenatal check up, 101(33.7%) taken irregular check up and 22(7.3%) taken regular check up. Raji *et al.*⁶ their booking status showed 100 (68.49%) cases were unbooked and the

remaining 46 (31.51%) cases were booked. 100 (68.49%) cases had no preparation for upcoming event indicating lack of antenatal care indirectly. Ghimire³ also found more than 90% were unbooked in our centre but most of them had their antenatal check care in sub health post, health post and primary health centres. Shahzad *et al.*⁵ their booking status showed that only 3 (3.0%) of the cases were booked and remaining 97(97.0%) had no preparation for upcoming event indicating lack of antenatal care indirectly.

In this study more than half (52.0%) patients had interval between attach & admission after 6 hour, 115(38.3%) between 1-6 hour and 29(9.7%) within 1 hour. Comparison by Ghimire³ study showed that most (61.4%) have fits to delivery interval was 6-12 hours.

In this study 187(62.3%) patients had antepartum eclampsia, 78(26.0%) had postpartum eclampsia and 35(11.7%) had intrapartum eclampsia. Nessa *et al.*² observed that 15 (42.85%) were antepartum eclampsia whereas 20(57.14%) were postpartum. Raji *et al.*⁶ among 146 cases, 113 (77.4%) cases were antepartum eclampsia, 4 (2.7%) were intrapartum eclampsia and 29 (19.9%) cases were postpartum eclampsia.

Regarding mode of delivery, majority (95.0%) patients had cesarean section and 15(5.0%) had normal vaginal delivery (NVD). Nessa *et al.*² caesarean section were common mode of delivery being 24 (68.57%) cases, whereas delivered by vaginally only 13 (37.14%) cases. 15 (42.85%) had convulsion before delivery and 20 (57.14%) thereafter. Raji *et al.*⁶ reported natural labour was found 31.51%, instrumental delivery 3.42%, spontaneous expulsion 2.74%, LSCS 61.65%, hysterotomy 0.68%. Ghimire³ nearly 70% women underwent caesarean delivery.

In this study maternal alive was found 293(97.7%) and death was 7(2.3%). Nessa *et al.*² after meticulous treatment 18(51.42%) patients improved in eclampsia ward, while 14 (40%) patients needed ICU support and 3(8.57%) died. Raji *et al.*⁶ Nine out of 146 cases were died. Ghimire³ study reported common causes of maternal deaths (5.36%) were hemolysis. Shahzad *et al.*⁵ reported 10 of these eclamptic mothers (10%) died, of these 7 because of pulmonary edema, 2 due to DIC and another 1 had renal failure.

In this study observed that male baby was found 203(67.7%) and female baby was 97(32.3%). More than three fourth (75.7%) babies had weight 2.5-4.0 kg. Alive babies were found 282(94.0%), neonatal death was 8(2.7%) and intrauterine death was 10(3.3%). Shahzad *et al.*⁵ the observations regarding birth weights of newborn babies were recorded for 95 subjects as 5 mothers died before their delivery. Three babies were of extreme low birth weight (1kg) while 25.05% were having very low birth weight (1.0-1.5). 43% of babies had low birth weight (1.6-2.4kg) and only 25% had a birth weight of > 2.4kg (mean:1.95+0.63). As far as fetal outcome is concerned alive born babies were 80%, of these 39% were term and 61% preterm while 20% were stillbirths out of which 17(17%) were preterm and 3(3%) were full term babies. The observed fetal morbidity was also high, as 15% babies were IUGR, 75(75%) babies required resuscitation at birth and 63% neonates were shifted to neonatal intensive care unit, 60% developed respiratory problem mainly because of pre-maturity and asphyxia and 22% died within 7 days of their lives in NNU. Raji *et al.*⁶ the observations regarding birth weight of newborn babies were recorded. 66 (60%) babies had 3kg. Perinatal mortality rate was 44.52%. Among live birth 29 babies died. 12 (41.38%) died due to prematurity and septicaemia, 9 (31.03%) babies died due to prematurity and respiratory distress syndrome, 4 (13.8%) died due to birth asphyxia and 4 (13.8%) died due to IUGR/meconium aspiration syndrome. As far as fetal outcome is concerned, alive born babies were 110 (75.64%) and 36 (24.66%) were dead born. Nessa *et al.*² among the babies only 6(17.14%) were term and healthy. Most (37.14%) of the babies were preterm low birth weight, 9 (25.71%) were IUGR and 7 (20%) were perinatal death. Ghimire³, perinatal complications included preterm baby (42.6%) and low birth weight (39.6%). 32.6% babies have APGAR score of <7 and of which 69.6% needed neonatal intensive care. Six were fresh stillbirth while three were macerated. Parinatal death was nine percent.

Conclusion

Improving ante-natal and emergency obstetric and neonatal care is mandatory to improve the outcome.

Conflict of interest: none.

Reference

1. Singh BM, Mishra R. Hypertensive disorders. Mishra R, editor. *Ian Donalds Practical Obstetric Problem*, Seventh edition, BI Publications Pvt Ltd: New Delhi; 2014: 142-75.
2. Nessa K, Khan S, Begum S, Sultana F & Akbar T. Incidence and Fetomaternal Outcome of Eclampsia in a Tertiary Medical College Hospital in Bangladesh. *Global Journal of Medical Research*, 2017; **17**(2): 1-4.
3. Ghimire S. Eclampsia: Feto-Maternal Outcomes in A Tertiary Care Centre in Eastern Nepal. *J Nepal Med Assoc* 2016; **54**(201): 24-8.
4. Das S, Sahu M, Mohapatra S, Padmavati VM, Panigrahi PK. Pregnancy Induced Hypertension and Feto-Maternal Outcome in a Tertiary Care Hospital in Eastern India: A Prospective Study, *Journal of Clinical and Diagnostic Research*, 2018; **12**(11): QC17-QC21.
5. Shahzad N, Yaqoob U, Hanif A. Feto Maternal Outcome in Patients with Eclampsia at a Tertiary Care Hospital. *PJMS* 2013; **7**(1): 76-80.
6. Raji C, Poovathi M, Nithya D. Prospective study of fetomaternal outcome in eclampsia in a tertiary care hospital. *Int J Reprod Contracept Obstet Gynecol*. 2016; **5**(12): 4329.