



Maternal and Perinatal Outcome of Eclamptic Patients in A Tertiary Care Hospital in Assam

KEYWORDS

eclampsia, maternal outcome, perinatal outcome

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ABSTRACT *Aim* – To study the incidence, clinical profile, maternal and perinatal outcome in eclamptic patients admitted in the department of Obstetrics and Gynaecology, Assam Medical College & Hospital, Dibrugarh, Assam.

Materials & Method – This is a retrospective study of all cases of eclampsia between 1/1/2015 to 31/12/2015. Case records were reviewed and information were collected and tabulated with respect to age, parity, mode of delivery, maternal and perinatal outcome.

Results – There was a total of 20916 deliveries and 227 cases of eclampsia during our one year study period. Incidence of eclampsia was found to be 1.08%. Eclampsia was found in 42.7% in age group 21-25 yrs. and 85.4% in primigravidas. 9 cases of maternal deaths and 26 cases of perinatal deaths were found.

Conclusion – Eclampsia continues to be an important cause of maternal and perinatal morbidity and mortality. This is due to lack of proper antenatal care, low socio economic conditions and lack of awareness.

Introduction-

Eclampsia is defined as the development of convulsions and/or unexplained coma during pregnancy or postpartum in patients with signs and symptoms of preeclampsia¹. WHO estimates incidence of preeclampsia is seven times higher in developing countries than developed world². The incidence of eclampsia in developed countries is estimated to about 5-7/10,000 deliveries. Whereas in developing nations varies widely 1 case per 100 to 1 case per 1700 pregnancies. The maternal mortality ratio for India in 2009 was 212 per 1 lakh population with hypertensive disorders causing 5% of maternal deaths³. Regular antenatal care and with early detection of preeclampsia, we can prevent eclampsia in large. The incidence of eclampsia in India has been quoted as 1.56%.

Eclampsia is still commonly perceived as the end of a linear spectrum that stretches from normal pregnancy through mild hypertension, pre eclampsia and finally eclampsia. However eclampsia may precede pre eclampsia and an alternate view is that seizures are one of the ranges of signs and symptoms caused by widespread endothelial damage secondary to an ischaemic placenta. Treatment of this disease is entirely empirical and symptomatic. Controversy still exists in the choice of the most appropriate treatment especially for control and prevention of fits. Eclampsia is a disease of young patients mainly primigravidas and affecting mostly antepartum. Most of the cases had fits in term pregnancy. Maternal and neonatal complications if not promptly treated lead to high mortality.

Materials and method-

This is a retrospective study of all cases of eclampsia admitted in the obstetrics & gynaecology department in Assam Medical College & Hospital between 1/1/2015 to 31/12/2015. Data regarding age, parity, antenatal care, duration of gestation, type of eclampsia, blood pressure and degree of proteinuria at the time of

admission, mode of delivery, maternal mortality and perinatal outcome were entered in a format and analyzed.

Results-

There were 227 cases of eclampsia out of a total deliveries of 20,916 in one year of our study period. The incidence of eclampsia in our hospital was 1.08% or 10.8/1000 deliveries. Eclampsia was found to be more common in young patients. Majority of the patients belonged to the age group 21-25 yrs. (42.7%) followed by age group 15-20 yrs. (35.7%), 26-30 yrs. (18.9%), 31-35 yrs. (1.8%), >35 yrs. (0.9%) (Table 1). Eclampsia was mostly seen in primigravidas (85.4%) compared to multigravidas (14.6%) (Table 2). Majority of the primigravidas with eclampsia belonged to age group 21-25 yrs. (43.8%) whereas majority of multigravidas with eclampsia belonged to age group 26-30 yrs. (48.4%). Majority of the patients developed eclampsia before the onset of labour, antepartum eclampsia (81.6%) followed by postpartum eclampsia (9.6%) and intrapartum eclampsia (8.8%) (Table 3). When gestational age of patients at the onset of convulsions was taken into account then it was found that most of the patients had eclampsia at term pregnancy (45.8%) followed by eclampsia at 32-37 wks. (41.5%), 26-31 wks. (11.9%) and 20-25 wks. (0.8%) (Table 4). Majority of the cases had spontaneous vaginal delivery (68.7%) followed by caesarean section (25.5%) and vacuum/forceps delivery (5.8%) (Table 5). Maternal complications included pulmonary oedema (33.4%), septic shock (22.2%), anaemic heart failure (22.2%) and ARDS (11.1%), HELLP syndrome (11.1%) (Table 6). There were a total of nine cases of maternal death in the duration of our study. Perinatal mortality and morbidity showed live birth (88.7%), IUFD (9.1%) and neonatal death (2.2%) (Table 7). Most of the neonatal deaths were due to birth asphyxia and pneumonia. There were 18 cases of neonatal complications which included birth asphyxia (38.8%), prematurity (33.6%), congenital pneumonia (11.1%), low birth weight (5.5%), neonatal jaundice (5.5%), sepsis (5.5%) (Table 8).

Discussion

In the present study the incidence of eclampsia was found to be 1.08% i.e 10.8/1000 deliveries which is comparable to Sunita TH et al(2013)⁴. Majority of the patients were of young age, 21-25 yrs.(42.7%) similar to studies by Chaturvedi et al (2013)⁵, Acharya G et al (1991)⁶, Choudhary P (2003)⁷, Pradeep MR et al (2013)⁸, Sunita TH et al (2013). Majority of the patients were primigravidas(85.4%) which tallies with the findings of Shiraz et al(2006)⁹, Dutta MR et al(2002)¹⁰, Shaheen B et al(2003)¹¹. Eclampsia was seen mostly antepartum (81.6%) which is comparable to studies of Choudhary P (2003), Pradeep MR et al (2013) and Sunita TH et al. The study in the UK showed relatively higher proportion of postpartum eclampsia (44%)¹². Better antenatal surveillance could be correlated with lower incidence of antepartum eclampsia in the developed world. Etiology of post partum eclampsia is less far understood. Most of the patients had eclampsia at term pregnancy (45.8%) which tallies with Marina Khanum et al (2004)¹³. Majority of the cases had spontaneous vaginal delivery (68.7%). Eclampsia per se is not an indication for caesarean section and mode of delivery had no significant effect on the outcome of eclampsia as per Ibrahim A et al(2011)¹⁴. The decision to perform caesarean section should be based on fetal gestational age, fetal condition, presence of labour, cervical Bishop score and maternal condition. Judicious and timely selection of cases for either vaginal delivery or caesarean section is going to improve the maternal and perinatal outcome. There were 9 maternal deaths(3.9%) and 26 cases of perinatal deaths(11.3%). There were 88.7% of live births, 9.1% of intrauterine foetal death(IUFD) and 2.2% of neonatal deaths which tallies with the findings of other studies. Most common cause of maternal death was due to pulmonary oedema(33.4%) and most common cause of neonatal death was due to birth asphyxia. This tallies with the findings of Sunita TH et al (2013) and Mackay AP et al(2001)¹⁵. According to the Royal College of Obstetricians and Gynaecologists(RCOG) good antenatal services will detect and treat preeclampsia and thus reduce the incidence of eclampsia. Prompt and timely treatment of eclampsia will reduce the maternal and perinatal morbidity and mortality¹⁶. Magnesium sulphate is the drug of choice for the prevention and treatment of convulsions in eclampsia. Once the eclamptic patient is stabilized, termination of pregnancy by induction of labour, augmentation of labour or caesarean section depending on clinical situation can improve the maternal and perinatal outcome.

Conclusion-

Eclampsia continues to be one of the major cause of maternal and perinatal morbidity and mortality in developing countries. This is due to lack of proper antenatal services, low socioeconomic condition and lack of awareness. Early presentation and timely decision to terminate the pregnancy will improve the maternal and perinatal morbidity and mortality.

Table 1- Age distribution in eclampsia patients

Age (in yrs)	Number	Percentage (%)
15-20	81	35.7
21-25	97	42.7
26-30	43	18.9
31-35	4	1.8
>35	2	0.9
Total	227	100

Table 2- Eclampsia in relation to parity

Parity	Number	Percentage (%)
Primigravida	194	85.4
Multigravida	33	14.6
Total	227	100

Table 3-Type of eclampsia

Type	Number	Percentage (%)
Antepartum	185	81.6
Intrapartum	20	8.8
Postpartum	22	9.6
Total	227	100

Table 4- Gestational age(in weeks) of patients at the onset of convulsions

Gestational age (in weeks)	Number	Percentage (%)
20-25	2	0.8
26-31	27	11.9
32-37	94	41.5
>37	104	45.8
Total	227	100

Table 5- Mode of delivery

Mode of delivery	Number	Percentage (%)
Spontaneous vaginal	156	68.7
Vacuum/Forceps	13	5.8
Caesarian	58	25.5
Total	227	100

Table 6- Maternal complications

Complications	Number	Percentage (%)
Pulmonary oedema	3	33.4
Septic shock	2	22.2
Anaemic heart failure	2	22.2
ARDS	1	11.1
HELLP Syndrome	1	11.1
Total	9	100

Table 7- Perinatal mortality and morbidity

Live birth	201(88.7%)
Intrauterine foetal death(IUFD)	21(9.1%)
Neonatal death	5(2.2%)

Table 8- Neonatal complications

Complication	Number	Percentage (%)
Birth asphyxia	7	38.8
Prematurity	6	33.6
Congenital pneumonia	2	11.1
Low birth weight	1	5.5
Neonatal jaundice	1	5.5
Sepsis	1	5.5
Total	18	100

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