

Fetomaternal Outcome in Eclampsia: Prospective Study in a Tertiary Centre

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Abstract

Background: Preeclampsia-eclampsia remains the leading cause of maternal and perinatal morbidity and mortality. Present study was planned to study maternal and perinatal outcome in women with eclampsia. **Materials and Methods:** This prospective observational analytic study was conducted in the department of Obstetrics and Gynecology, Surat Municipal Institute of Medical Education and Research (SMIMER) from August 2016 to July 2017. **Results:** Total 60 cases of eclampsia were admitted having incidence of 0.72%. 78.4% cases were antepartum eclampsia. 40% cases had taken no ANC visits. Maternal death occurred in two cases. 18.3% cases had stillbirths, 26.7% babies required NICU admissions. **Conclusion:** Eclampsia is an important Obstetric emergency with high maternal and perinatal mortality and morbidity. Timely and appropriate interventions including primary management, early referral and proper management help in reducing complications.

Keywords: Pre-Eclampsia; Eclampsia; Maternal Morbidity; Perinatal Morbidity.

Introduction

Preeclampsia-eclampsia remains the leading cause of maternal and perinatal morbidity and mortality

[1,2,3,4]. Preeclampsia when complicated with convulsion and or coma is termed as eclampsia. The term eclampsia is derived from a Greek word meaning like a “flash of light”. It may occur after premonitory symptoms or abruptly without any warning manifestations [5,6,7]. In India, reported incidence of eclampsia varies from 0.179 to 3.7% and maternal mortality varies from 2.2 to 23% [2,4,8].

Aims and objectives of this study were to know the maternal and perinatal outcome in women with eclampsia.

Materials and Methods

This prospective observational analytic study was conducted in the department of Obstetrics and Gynecology, Surat Municipal Institute of Medical Education and Research (SMIMER) from August 2016 to July 2017. Permission from Institutional ethics committee was obtained. All women admitted with eclampsia were included in the study. After rapid initial assessment, all women with eclampsia were admitted in labour room or Obstetric ICU. History obtained from relatives, clinical examinations were performed to rule out other causes of convulsions. Investigations like CBC, RFT, LFT, coagulation profile, USG etc performed. Convulsions were controlled with Inj. magnesium sulphate (MgSO₄) by Pritchard regimen. BP was controlled by oral or IV labetalol. Pregnancy was terminated by induction of labour or LSCS depending upon maternal and fetal conditions and Bishop Score. Magnesium sulphate was continued up to 24 hours after delivery or last convulsion whichever was later. Maternal and foetal outcomes were noted.

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Results

There were 60 cases of eclampsia admitted in the department having incidence of 0.72% among all Obstetric admissions. As shown in Table 1, 70% of cases belong to 21-30 years of age. Majority of women were primipara. As shown in Table 3, majority of cases had antepartum eclampsia (78.4%), 18.3 % cases had postpartum eclampsia. As shown in table 4, 40% of cases had taken no ANC visits; 50% of cases had taken less than 3 ANC visits. Vaginal delivery was achieved in 61.1% cases (Table 5). Eclampsia is a

serious complication of pregnancy. In our study, maternal death occurred in two cases, one due to pulmonary oedema and other due to DIC with ARF. Four women developed HELLP syndrome, three cases developed DIC, two cases developed ARF. One case of postpartum eclampsia had recurrent convulsions in spite of MgSO₄ therapy; her MRI was suggestive of PRES. She was given anticonvulsant drug Inj. levetiracetam and discharged in good condition (Table 6). As shown in table 7, 11 cases had stillbirths. 26.7 % babies required NICU admissions for various reasons like prematurity, birth asphyxia etc.

Table 1: Maternal age

Maternal age (years)	Number (n=60)	Percentage
≤ 20	8	13.3 %
21-25	24	40.0 %
26-30	18	30.0 %
31-35	6	10.0 %
36-40	4	6.7 %

Table 2: Parity status

Parity	Number (n=60)	Percentage
Primipara	42	70 %
Multipara	18	30 %

Table 3: Type of eclampsia

Type	Number (n=60)	Percentage
Antepartum eclampsia	47	78.4 %
Intrapartum eclampsia	02	3.3 %
Postpartum eclampsia	11	18.3 %

Table 4: Antenatal care

Number Of ANC Visits	Number Of Cases (N=60)	Percentage
0	24	40.0 %
1-3	30	50.0 %
4 Or More	06	10.0 %

Table 5: Mode of delivery in antepartum eclampsia

Mode of delivery	Number of cases (n=54)	Percentage
Vaginal delivery	33	61.1 %
Instrumental	05	9.3 %
LSCS	16	29.6 %

Table 6: Maternal morbidity and mortality

Complication	No of Cases	Percentage
Mortality	2	3.3 %
HELLP syndrome	4	6.7 %
DIC	3	5.0 %
Acute renal failure	2	3.3 %
PRES	1	1.6 %

HELLP= hemolysis, elevated liver enzymes and low platelet; DIC= disseminated intravascular coagulation; PRES= posterior reverse encephalopathy syndrome

Table 7: Neonatal outcome

Outcome	No of cases (n=60)	Percentage
Live	49	81.7 %
Still birth	11	18.3 %
NICU admission	16	26.7 %

Discussion

Eclampsia is a common Obstetric emergency which may lead to maternal and perinatal mortality. Maternal complications of eclampsia are: cardiorespiratory failure, pulmonary edema, acute renal failure, HELLP syndrome, cerebrovascular accidents, abruptio placentae and DIC. Poor fetal outcome is attributed to iatrogenic prematurity, respiratory distress, intrauterine asphyxia, fetal growth restriction and intrauterine death (IUD) [9,10]. Eclampsia may occur in antepartum (38-53%), intrapartum (18-36%) or postpartum (11-44%) period. Principles of management are: control of convulsions, antihypertensive drugs and delivery of fetus. Magnesium sulphate is the drug of choice for control of convulsions [1,7]. Regular antenatal care (ANC), health education, improvements of socioeconomic conditions and spreading awareness in community have major role in prevention of eclampsia. Timely and appropriate interventions including primary management, early referral and proper management help in reducing morbidity and mortality of both mother and fetus [10].

In this study, the incidence of eclampsia was 0.72% which was comparable with other Indian studies [2,3,4,5,8,9,10]. Incidence is very low in developing countries (0.043% in USA and 0.049% in UK) [6,7,10]. Majority of cases were belong to age group 21-30 years of age which is comparable with other studies [2,3,4]. In our study 78.4% cases were antepartum eclampsia which is similar to study by Raji C [11] et al. Regular antenatal care help in identification of preeclampsia in early stage and its proper management prevents development of eclampsia. In our study, 40% cases had not taken ANC visits and 50% cases were taken three or less visits. In the study by Raji C [8] et al 68.5% cases were unbooked. Vaginal delivery was achieved in 61.1% cases. 29.6% cases required LSCS for various indications, while 61.6% cases required LSCS in study by Raji C et al [8]. In our study, mortality occurred in two cases (3.3%): one due to pulmonary oedema and other due to DIC+ARF. In the study by Patel PC [2] et al, mortality occurred in 8.6% cases. In our study, 16.7% cases developed complications like HELLP syndrome, DIC, ARF etc. Which were comparable to other studies [2,3,4,9]. In our study,

live birth was achieved in 81.7% cases which was 86.9% in study by Patel PC [2] et al and 75.6% cases in study by Raji C et al [8].

Conclusion

Eclampsia is an important Obstetric emergency with high maternal and perinatal mortality and morbidity. Although it is not always a preventable condition, regular antenatal care, timely diagnosis, primary management with early referral and proper management in a tertiary care centre improves outcome.

References

1. Kumar P. Management of eclampsia. FOGSIFOCUS on pregnancy induced hypertension. May 2007;18-21.
2. Patel PC, Kathawadia KK, Saini HB. A study of fetomaternal outcome in eclampsia- A case control study. NJMR, 2017 Jan- Mar;7(1):5-8.
3. Suman G, Somegowda S. Maternal and perinatal outcome in eclampsia in a district hospital. J Obstet Gynecol Ind. 2007;57:324-327.
4. Sarika C, Bharat R, Nerges M. Availability of treatment of eclampsia in public health institutions in Maharashtra, India. J health Popul Nutr. Mar 2013;31(1):86-95.
5. Singhal SR, Deepika, Anshu, Nanda S. Maternal and perinatal outcome in sever pre-eclampsia and eclampsia. J SAFOG. 2009 Sep-Dec;1(3):25-28.
6. Walker JJ. Pre-eclampsia. Lancet 2000;356:1260-65.
7. Diagnosis and management of pre-eclampsia and eclampsia. ACOG practice bulletin. Obstet Gynecol 2002;99:159-67.
8. 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;43(5):29-34.
9. Pradeep MR, Shivanna L. Retrospective study of eclampsia in a teaching hospital. Int J Recent Trends in Science and Technology. 2013;8(3):171-3.
10. Prabhakar G, Shinde MA, Jadhav CA. Clinical study of eclampsia patients at Dr. V M Govt Medical College, Solapur, India. IOSR J Dent and Med Sci .2015; 13(7):10-6.