

Retrospective Study of Eclampsia in a Teaching Hospital

Pradeep M. R.^{1*}, Lalitha Shivanna²

¹Assistant professor, ²Professor and HOD, Department of OBGY, Mandya Institute of Medical Sciences, Mandya 571401 Karnataka, INDIA.

*Corresponding Address:

majormrp@gmail.com

Research Article

Abstract: Eclampsia is a one of the major cause of both maternal and perinatal mortality in India. Retrospective study of eclampsia was done in our hospital from Jan-2011 to Jun-2013 Over a period of 2 ½ year to know the incidence, clinical profile and current management of eclampsia patients along with maternal and perinatal outcome. Analysis of case records of all eclampsia patients admitted to our hospital from Jan-2011 to Jun-2013 was done. Incidence of eclampsia was found to be 2.19/1000 deliveries. Eclampsia is a disease of young women between 19-24 years (79%) and primigravida (67%). Majority of them had convulsions before the onset of labour (87%). Eclampsia occurs most commonly at term gestation. Most of them had mild-moderate hypertension at the time of convulsion. Majority had vaginal delivery (63%) with current intervention, there were no maternal deaths. Perinatal mortality was 300/1000 live births. The current intervention for eclampsia is effective in reducing maternal mortality but management of perinatal outcome still needs improvement.

Keywords: Eclampsia, Hypertension.

Introduction

Eclampsia (Greek “Shining forth”) is an acute and life threatening complication of pregnancy, Characterized by convulsions and unexplained coma in a patient with signs and symptoms of pre eclampsia during pregnancy or postpartum period.⁽¹⁾ It has remained as a major public health threat both in developed and developing countries, Contributing to maternal and perinatal morbidity and mortality. Preeclampsia precursor to eclampsia, ranges between 2 % to 10 % of total pregnancies worldwide. WHO estimates incidence of preeclampsia is seven times higher in developing countries than developed world⁽²⁾. The incidence of eclapmsia 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^(3 and 4). The maternal mortality ratio for India in 2009 was 212 per 1 lakh population⁽⁵⁾. with hypertensive disorders causing 5% of maternal deaths⁽⁶⁾. Regular Antenatal care and with detection of preeclampsia early, we can prevent eclampsia in large. Unfortunately eclampsia is still a major cause of maternal mortality in developing nations like India with poor socio economic status and lack of antenatal care.

Materials and Methods

We have done a retrospective study of eclampsia cases in Mandya Institute of Medical Sciences, a Teaching and

referral Hospital Mandya from January-2011 to June-2013 a period of two and half years. Most of the cases were referred from rural areas, PHC, Community health centre and private hospitals in the district. In this two and half year period a total of 33 eclampsia cases were admitted among 15068 deliveries. Cases ware studied with respect to Antenatal care, Age, Parity, Period of gestation blood pressure, mode of delivery and perinatal outcome.

Immediate care for of ALL Eclampsia cases

All cases were shifted to eclampsia room examined, and started with Pritchard’s regimen. Magnesium sulphate as a anti convulsant, therapy (4gm 20% slow I.V and 5gm 50% IM on each buttocks, followed by 5gm IM alternate buttocks, 4th hourly till 24 hours/last fit). Patellar reflex, Respiratory rate (>12 cycles) and urine output (>30ml) monitored for magnesium toxicity.

(ii) Tab. Nifedipine 10mg orally given to control blood pressure. If not controlled 10mg repeated every 30min maximum of 50mg.

(iii) Supportive therapy – suctioning, mouth gag, I.V. line, oxygen inhalation, mannitol infusion given for all patients.

(iv) Induction/ Acceleration of labor were carried out for termination of pregnancy.

Observations

Our study shows 33 cases of eclampsia admitted to Mandya Institute of Medical Sciences from Jan-2011 to Jun-2013 over a period of Two and half years, among 15,068 deliveries with the incidence of 2.19/1000 deliveries.

Table 1: Age distribution in eclampsia patients

18 year or less	NIL
19-24 years	26 (79%)
25-30 years	07 (21%)

Eclampsia is most prevalence at the age between 19-24 years.

Table 2: Period of Gestation at the onset of convulsions

21-27 weeks	02 (6%)
28-32 weeks	04 (12%)
33-36 weeks	13(40%)
37-42 weeks	14 (42%)

Majority of 94% of patients had eclampsia in third trimester. It is 40% among near term patients (33-36 weeks) and 42% in term patients.

Table 3: Eclampsia and parity

Primigravida	22 (67%)
Multigravida	11 (33%)

In our study eclampsia was commonly seen in primigravida.

Table 4: Antenatal care

Booked cases	04 (12%)
Un booked case/Irregular ANC	29 (88%)

Most of them were unbooked and referred from periphery. Among booked cases one had intrapartum eclampsia with normal blood pressure. Second a case of pre eclampsia refused admission to the hospital reported with convulsion after 13 days. Third had post partum eclampsia. Fourth one suffered convulsions at 26 weeks (Blood pressure was normal at 20 weeks.)

Table 5: Systolic blood pressure and eclampsia

<140 mm hg	05 (15%)
140-159 mm hg	15 (45%)
160-179 mm hg	08 (25%)
>180 mm hg	05 (15%)

Approximately 60% patients were having mild to moderate Hypertension. With systolic of < 160 mm hg.

Table 6: Type of Eclampsia

Ante partum eclampsia	29 (87%)
Intra Partum eclampsia	3 (10%)
Post partum eclampsia	1 (3%)

Most of them had ante partum eclampsia.

Table 7: Diastolic blood pressure and eclampsia

Diastolic Bp	Numbers
<80 mm hg	03 (09%)
89-99 mm hg	07 (21%)
100-109 mm hg	10 (30%)
>110 mm hg	13 (39%)

Majority of patients were having diastolic Bp >110 mm hg

Table 8: Type of Delivery in Eclampsia

Vaginal delivery	21 (63%)
Vacuum delivery	02 (6%)
Assisted breech delivery	01 (3%)
Caesarean Section	09 (27%)

Vaginal delivery was the most common mode of delivery followed by caesarean section. 63% had vaginal delivery followed by 27% by LSCS.

Table 9: Perinatal Mortality and Morbidity

Live	23 (70%)
Intra uterine fetal demise	02 (6%)
Still birth	03 (9%)
Early neonatal death RDS/ Perinatal Asphyxia and Sepsis	05(15%)

In our study perinatal mortality was 30%

Table 10: Maternal Complications

Complication	No of Cases	%
Abruptio placenta	01	3%
CVA	01	3 %
PPH	01	6%
Post Partum Pyrexia	03	12 %

Most common complication in our study was post partum pyrexia. No Maternal deaths noted from Eclampsia in our study.

Discussion

Incidence of Eclampsia in our hospital from Jan-2011 to Jun-2013 is 2.19/1000 deliveries. Whereas the incidence of Eclampsia in Eastern India is 3.2%. In Kerala is 3.8%, 4.9% in Andhra Pradesh, 15% in Madhya Pradesh and 20.7% in Bihar⁽⁷⁾. These figures are higher compared to developed countries. With the incidence of 1 in 3250 pregnancies in US⁽⁸⁾ and 1 in 2000 pregnancy in Europe⁽⁹⁾. In developed countries, the incidence of eclampsia is significantly low probably because of the comprehensive antenatal care, early detection of pre eclampsia, and its management, and uniform national health care policy. Majority of our cases (88%) were unbooked cases/Irregular Antenatal care, and with low socio economic status. The signs and symptoms of pre eclampsia was not detected until development of eclampsia. In our study eclampsia was common in young pregnant woman between 19-24 years (79%) same as in the (83%) study of Chaurvedi *et al*⁽¹⁰⁾. Eclampsia was a disease of primigravida majority of women 67% in our study were primigravida which is comparable to study. Shiraz's *et al* 69.1%, Dutta MR *et al* 66% and Shaheen B *et al* 69%^(11, 12 and 13). Around 60% of eclampsia patient had mild to moderate systolic hypertension between 140-160mmhg. Comparable to Choudhary *et al*⁽¹⁴⁾ having 66% of patient mild to moderate hypertension. In our study 15% of the patients were having systolic Blood Pressure less than 140mmhg and 9% were having diastolic Bp less than 90mmhg which gives inference that eclampsia can occur in small portion of pregnancy with normal Blood Pressure. There was 300/1000 of perinatal death in our study which can be compared to Rajasri G. Yaliwal *et al* of 350/1000. There were no maternal deaths in our 2 ½ years study from eclampsia.

Conclusion

Incidence of eclampsia is little lower compared to other states in India. But we are far behind to developed countries. Eclampsia is a disease of young females, more common in primigravida with mild to moderate hypertension. It can occur with normal B.P without proteinuria in a small portion of our study. Most of the patient of eclampsia was irregular/ No antenatal checkups. Eclampsia can be prevented by in large by

proper antenatal care and detection of pre eclampsia with early management.

References

1. Baha M sibai, Diagnosis prevention and management of eclampsia, American college of obstetrician and gynecologists, vol 105, no 2, Feb 2005. 402-410.
2. WHO. Make every mother and child count, in The world health report 2005. Geneva, Switzerland: World Health Organization; 2005.
3. World Health Organization. Global Program to Conquer Preeclampsia/ Eclampsia. 2002.
4. WHO. Coverage of Maternity Care: A Listing of Available Information. Geneva, Switzerland: World Health Organization; 2004.
5. India Registrar General of India. Special bulletin on maternal mortality in India 2007-09: sample registration system. New Delhi: Office of Registrar General, Ministry of Home Affairs, Government of India. 2011. p. 4. p.
6. India Registrar General of India. Maternal mortality in India, 1997-2003: trends, causes and risk factors; sample registration system. New Delhi: Registrar General of India, Government of India. 2006. p. 29. p.
7. Sontakke P, Reshmi RS, Sebastian D. Obstetric morbidity among currently married women in selected states of India. *J Fam Welf.* 2009;55: 17–26.
8. Ventura SJ, Martin JA, Curtin SC et al. Births: Final date for 1998. National Vital Statistics Reports, Vol. 48, No. 3, Hyattsville, Md, National Center for Health Statistics 2000
9. Douglas KA, Redman CWG. Eclampsia in the United Kingdom. *BMJ* 1994; 309:1395-1400.
10. Sarika Chaturvedi, Bharat Randive, and Nerges Mistry, Availability of Treatment for Eclampsia in Public Health Institutions in Maharashtra, India *J Health Popul Nutr.* 2013 March; 31(1): 86–95.
11. Sheraz S, Boota M. Shahzad S. Eclapsia. *Prof Med J.* 2006. 13 (1):27-31.
12. Datta MR Pant L, Kabiraj M, Basu SB. Magnesium sulfate in eclampsia: A safe, efficient and cost-effective approach *J Obst Gynecol India* 2002;52(3):65-68.
13. Shaheen B. Hassan L, Obaid M Eclampsia, a major cause of maternal and perinatal mortality: A Prospective analysis at a tertiary care hospital of Peshawar. *J Pak Med Assoc* 2003;53: 346
14. Choudhary P, Eclampsia a hospital based retrospective study Maternity Hospital, Kathmandu. Kathmandu University Medical Senior Registrar Journal (2003) Vol. 1, No. 4, Issue 4, 237-241.
15. Dr. Rajasri G. Yaliwal, Dr. P.B. Jaju and Dr. M. Vanishree Eclampsia and Perinatal Outcome A Retrospective Study in a Teaching Hospital *Journal of Clinical and Diagnostic Research.* 2011 October, Vol-5(5): 1056-1059.