International Journal of Clinical Obstetrics and Gynaecology

ISSN (P): 2522-6614
ISSN (E): 2522-6622

www.gynaecologyjournal.com
2021; 5(1): 401-404
Received: 06-11-2020
Accepted: 10-12-2020

Dr. Mangal Supe
Santa Nagar, New Sangavi, Pune, Maharashtra, India

Dr. Ketan Jangale
Dhore Nagar, New Sangavi, Pune, Maharashtra, India

Corresponding Author:
Dr. Mangal Supe
Santa Nagar, New Sangavi, Pune, Maharashtra, India

Eclampsia: A study in a tertiary care centre

Dr. Mangal Supe and Dr. Ketan Jangale

DOI: https://doi.org/10.33545/gynae.2021.v5.i1g.844

Abstract
Background: Eclampsia is a common obstetric emergency associated with significant maternal and fatal morbidity and mortality rate. Incidence varies from 1 in 100 to 1 in 2000 pregnancies. Eclampsia accounts for 24% of all maternal deaths in India. Eclampsia is a significant cause of perinatal mortality and morbidity in non-industrialised countries (up to 40% perinatal deaths). The aim is to evaluate incidence, management, perinatal & maternal morbidity/ mortality associated with Eclampsia in our hospital setting.
Methods: The retrospective study was conducted over a period of 6 months in Obstetrics and gynaecology department of Yashwantrao Chavhan Memorial Hospital, Pune (YCMH). The study included 4712 deliveries from August 2019 to February 2020.
Results: The total number of eclampsia cases was 25. The incidence of antepartum eclampsia was 0.53% (25/4712) at our center. Not a single maternal deaths due to eclampsia recorded. There were 6 early neonatal deaths most commonly due to prematurity.
Conclusions: The incidence of eclampsia in our study was 0.53%. Majority of patients were in age group of 18-25 years (84%) and with a gestational age of 26-34 weeks (54%). Among 25 patients the 14 patients (56%) were primigravida. No maternal death occurred. Magnesium sulfate was used for treating convulsions in all 25 eclamptic patient. Eclampsia is a life threatening complication of pregnancy, in our study there was no maternal mortality but perinatal outcome still needs to be improved. However an improvement in antenatal care, upgrading the neonatal facilities and early delivery by caesarean section can improve the perinatal outcome.

Keywords: Pre-eclampsia, eclampsia, epilepsy, maternal mortality rate

Introduction
Pre-eclampsia is defined by the International Society for the Study of Hypertension in Pregnancy as gestational hypertension of at least 140/90 mmHg on two separate occasions ≥4 hours apart accompanied by significant proteinuria of at least 300 mg in a 24 hour collection of urine, arising de novo after the 20th week of gestation in a previously normotensive woman and resolving completely by the 6th postpartum week. Hypertensive disorders complicating pregnancy are common and form one of the deadly triad, along with haemorrhage and infection. Pre-eclampsia is a pregnancy specific syndrome characterised by hypertension (>140/90 mm of Hg) and proteinuria (300 mg/ 24 hr. urine) [1]. It is one of the common obstetric emergency. Although eclampsia is uncommon in developed countries, it is still a major cause of maternal morbidity and mortality worldwide [2]. In India the incidence of eclampsia has been quoted as 220/10,000 [3]. Majority of the cases of eclampsia are the patients who have not received proper medical attention during their antenatal period. Eclampsia is often insidious in onset and is usually, characterized by hypertension, proteinuria, with or without edema, associated with seizures either during pregnancy, in labour or within ten days of delivery [4]. Eclampsia occurs more commonly in last trimester of pregnancy and becomes increasingly more frequent near term. It can occur during antepartum (35% to 45 %), intrapartum (15% to 20%) or in postpartum (35% to 45%) period [5].
The clinical features of eclampsia include seizures or postictal state, headache usually frontal, generalized oedema, vision disturbance such as blurred vision and photophobia, right upper quadrant abdominal pain with nausea, amnesia and other mental status changes [6].
We conducted a retrospective study in the patients of eclampsia attending a tertiary care hospital to identify a crucial step or link to decrease the morbidity and mortality in developing countries.

Material and methods
The retrospective study was conducted over a period of 6 months in Obstetrics and gynaecology

department of Yashwantrao Chavhan Memorial Hspital, Pune (YCMH). The study included 4712 deliveries from August 2019 to Feb. 2020. During the review period 25 patients satisfying the inclusion criteria were taken into the study.

Results

During the review period, a total of 4712 deliveries were recorded and 25 cases of eclampsia were reported, thus accounting for an incidence 0.53%.

The eclampsia is mainly seen in patients with age group of 18-25 years (84%) as shown in and with a gestational age of 26-34 weeks (54%).

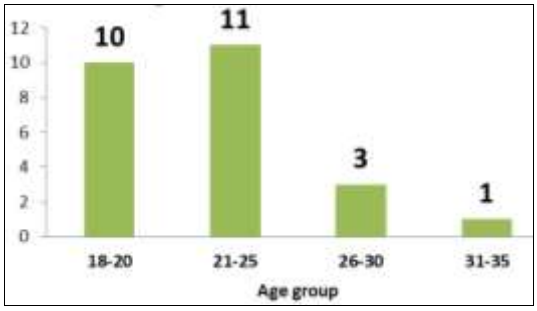

Fig 1: Age wise distribution

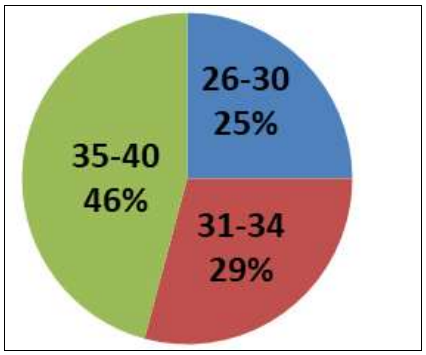

Fig 2: Gestational age in weeks

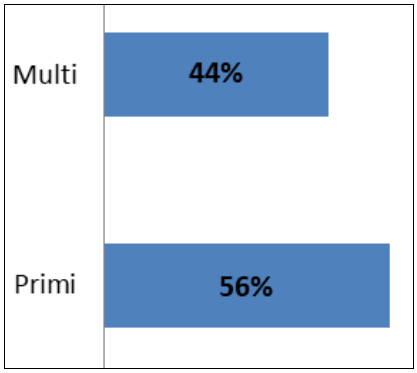

Fig 3: 14 patients (56%) were primigravidae & 11 patients (44%) were multi gravidae.

During study 24 patients had antepartum and 1 patient had postpartum eclampsia.

Majority of patients presented to hospital with the clinical presentation of convulsions followed by superimposed complications like headache, vomiting, epigastric pain & convulsions.

Fig.4 shows the number of convulsions in eclampsia patients, 10 patients were presented with 1 episode, 3 patients with 2&3 episodes, and 4 patients with 4 & more episodes of convulsions.

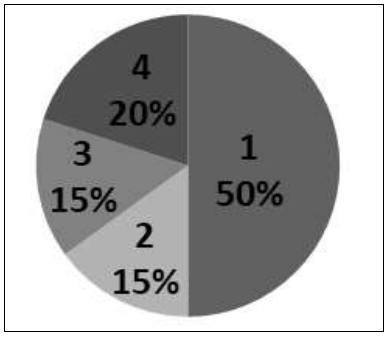

Fig 4: Convulsion frequency

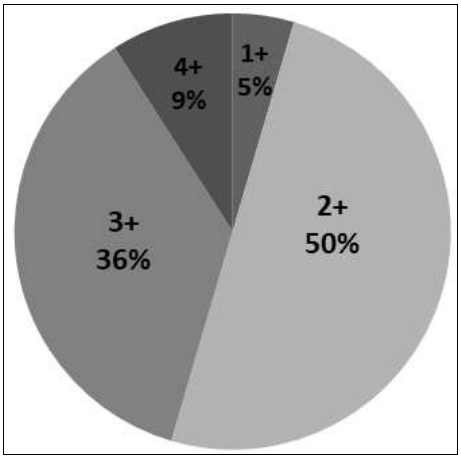

Fig 5: Proteinuria

Low birth weight and preterm delivery were higher in eclampsia patients. Preterm delivery occurred in 13 patients (54%) and 22 newborns (92%) had a low birth weight of less than 2500 gm. There were Two (8.69%) intra uterine death and four (17.39) still birth. There were no maternal deaths.

Caesarean delivery was the commonest mode of delivery in 23 (96%) among the patients with eclampsia.

Fig. 6 and 7 shows the ranges of systolic and diastolic blood pressures observed during study.

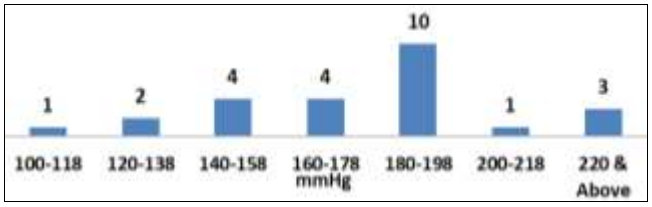

Fig 6: Systolic blood pressure

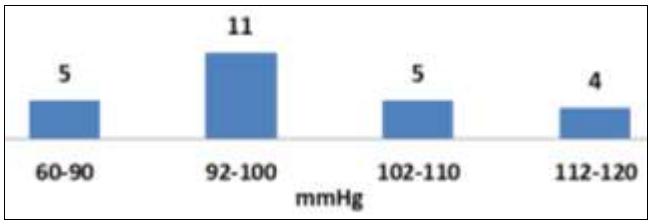

Fig 7: Diastolic blood pressure

Fig.8 shows degree of protienuria at presentation. 11 patients (50%) had +2 and 8 patients (36%) had proteinuria of +3.

Inj. Labetalol in 19 patients (76%) and inj. Mannitol in 13 patients (52%) was used for controlling Blood Pressure. Combination of both drugs used in 8 (32%) patients.

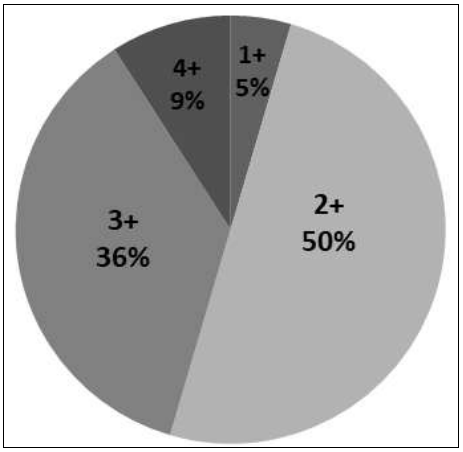

Fig 8: Proteinuria

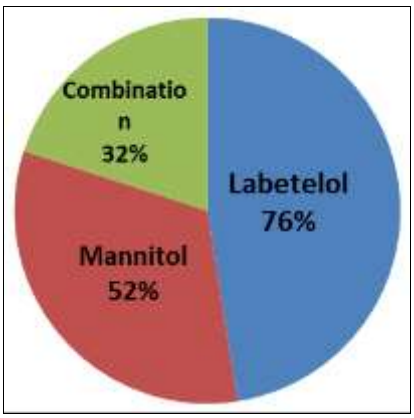

Fig 9: Medicine

Magnesium sulfate in all 25 patients was used for treatment of convulsion in eclamptic patient.

Discussion

Eclampsia is a very serious complication of severe preeclampsia. Eclampsia remains one of the leading causes of maternal and perinatal mortality and morbidity in the developing world [2]. The incidence of eclampsia in this study was 0.53%. This is comparable to other Indian studies. It is also comparable to the incidence in other countries of the region.[7] Majority of patients in our study were in age group 18-25 years. This finding is comparable with other studies in which majority of women were young between 21-29 years of age i.e. 68.9% [8]. Gravidity also influences the incidence of eclampsia. Primigravida are more likely to develop eclampsia compared with the multigravida. Majority of the patients 14 (56%) in present study were primigravida. Previous studies also showed higher prevalence of primigravida i.e 58% [9]. In our study, most of the patients 13 (54 %) were presented at gestational age less than 34 weeks and 11 (46%) patients were presented with more than 34 weeks of gestational age. Relatively more cases occurred before 37 completed weeks in the study from UK (44%) [10].

Mode of delivery is very important because delivery is the only cure for eclampsia and it must take as early as possible after treatment begins. Delivery is always the ultimate goal of treatment and will be attempted regardless of how far along the pregnancy has progressed. In our study caesarean delivery is the common mode of delivery. Caesarean section was the predominant mode of delivery among eclamptic patients as reported by several studies. If convulsions are effectively controlled and patient is stabilized, clinician can await spontaneous vaginal delivery after inducing labour [11].

There were 6 neonatal deaths among eclamptic patients (26.08%), which is comparatively lower than that reported in a retrospective study of G. Acharya (31.25%) [12] and the study of Swain S (38.6%) [3].

Maximum blood pressure that we observed in our study was 240/120 mm of Hg. Majority of them had proteinuria at the time of admission. G. Acharya and S. Schultz, 1991 reported severe hypertension in 57.14% of cases and proteinuria in all cases at the time of admission [12]. These findings suggest that hypertension and/or proteinuria are risk factors for development of fits, but fits can also occur without preceding hypertension and or proteinuria.

Management of eclampsia consists of prevention or treatment of seizures, control of blood pressure and ultimately, delivery of the infant. High blood pressure can damage the placenta and cause the death of the unborn child. This high blood pressure can affect the brain, kidney, liver, and lungs. So, Antihypertensive medications are used to maintain diastolic blood pressure <110 mm Hg. A combination of Labetalol and Mannitol in 8 patients (32%) were mostly prescribed to control blood pressure.

Magnesium sulfate is the most commonly used drug for treatment in eclamptic patient. All twenty five patients (100%) received magnesium sulphate regime. It is understood that treatment of eclampsia is symptomatic as underlying cause is not clearly known. In general, aim of treatment in eclampsia is prevention of further convulsions as it is the recurrent convulsions may lead to significant cerebral anoxia and associated with adverse outcome. The greater efficacy of magnesium sulphate compared to diazepam or phenytoin for prevention of recurrence of fits is now accepted worldwide [13, 14, 15].

Conclusions

The incidence rate in our study is found to be 0.53% which is on par with the incidence rate of other studies conducted in this region. Eclampsia still remains a major cause of perinatal loss in many countries, as the exact cause for its occurrence is unknown. In our study, low birth weight is recorded in many patients and no maternal death has been occurred. Magnesium sulfate has been shown to be an effective treatment option for the prevention of eclampsia. Once eclampsia occurs, carries a high maternal & perinatal mortality. The key to prevention is proper antenatal check-ups with availability of health facilities to every level of health care. Early detection of high risk cases so that timely action can be taken. Early prediction and diagnosis requires high index of suspicion and comprehensive training of health professionals at all levels of health care. In case of inadequate or untrained staff the case should be promptly referred to tertiary care hospital. The interval between first convulsions to delivery should be minimized to prevent complications. Moreover having pre-eclampsia in one pregnancy is a poor predictor of subsequent pregnancy but a strong predictor for recurrence in future pregnancies. The answer to poor management of eclampsia lies in better education and training of all obstetricians, anaesthetists, midwives, and general practitioners in the diagnosis and treatment of severe pre-eclampsia and eclampsia. Protocols for the management of fluid balance, antihypertensive and anticonvulsant therapies should be available and reviewed regularly.

References

1. Working Group Report on High Blood Pressure in Pregnancy. National Institute of Health, National Heart

Lung and Blood Institute, National High blood pressure education program, NIH publication 2000, 00-3029.
2. Sheraz S, Shahzad S. Eclampsia. Professional Med J 2006;13:27-31.
3. Swain S, Ojha KN. Maternal and perinatal mortality due to eclampsia. Indian Pediatr 1993;30(6):771-3.
4. Castro LC. Hypertensive disorders of pregnancy in: Hacker N Moore JG eds. Essential of obstetrics and gynecology, 3rd ed. Philadelphia, Pa. WB Saunders Inc 1998, 196-207.
5. Vidyadhar B, Purushottam A. A study to compare the efficacy of low dose Magnesium Sulphate (dhaka) regime with pritchard regime in Eclampsia. International Journal of Biomedical and Advance Research 2012;03(01):54-8.
6. Sidra Yaqub, Bushra Zafar, Khawaja Tahir et al. Management of Eclampsia. Journal of Pharmaceutical Science and Technology 2011;3(1):528-35.
7. Rajasri G. Yaliwal PB, Jaju M. Eclampsia and Perinatal Outcome- A Retrospective Study in a Teaching Hospital. Journal of Clinical and Diagnostic Research 2011;5(5):1056-9.
8. Nahar S, Begum S. Use of misoprostol for induction of labor in unfavorable cervix in eclampsia. Pak J Med Sci 2004;20:181-6.
9. Akhter M. Study of hypertensive disorders of pregnancy in Mitford Hospital [dissertation] Dhaka. Bangladesh College of Physician and Surgeons 1994.
10. Douglas LA, Redman CWG. Eclampsia in the United Kingdom. BMJ 1994;26:1395-400.
11. Saima A, Safia S. Eclampsia-perinatal outcome in patients at Nishtar Hospital Multan. Professional Med J 2012;19(6):789-93.
12. Ganesh Acharya, Silvia Schultz: Eclampsia in Patan Hospital: A two year retrospective study. JNMA 29, 254-8.
13. Dommise J. Phenytoin sodium and magnesium sulphate in the management of Eclampsia. Br J Obst. Gynae 1994:97:104-9.
14. Crowther C. Magnesium sulphate Vs diazepam in the management of eclampsia: a randomized controlled trial. Br J Obstet Gynae 1990:97:110-7.
15. Sibai BM. Magnesium sulphate is the ideal anticonvulsant in preeclampsia-eclampsia. sAm J Obstet Gynaecol 1990;162:1141-5.