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A Retrospective Study of Maternal and Perinatal Outcome in Eclampsia in a Tertiary Care Hospital

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Abstract
Introduction: *Eclampsia is defined as the development of convulsions and/or coma unrelated to other cerebral conditions during pregnancy or in the post-partum period in patients with signs and symptoms of pre-eclampsia after 20weeks of gestation.*
Materials and Methods: *This study was done on "Maternal and Perinatal outcomeof eclampsia in a tertiary care centre" (KMC & GGH) fromJanuary 2018 to December 2018. The study was conductedin Obstetrics and Gynecology Department, Kurnool MedicalCollege Kurnool, AP, India. The present study aims todetermine the factors affecting the maternal and perinataloutcome of eclamptic mothers. Women with other causesof convulsions were excluded.It was an observational study. Patients with eclampsia wereadmitted through emergency. Inclusion criteria was thepatients developing eclampsia in second half of pregnancyor within ten days after delivery; and exclusion criteria waspatients with convulsion due to epilepsy, cerebral cause,malaria or any other metabolic cause and patientspresenting ten days or more after delivery.*
Results: *In this study 218 eclampsia cases were studied. The incidence of eclampsia in KMC & GGH during studyperiod was 1.39%. Most of the patients were primigravida accounting 83.48% out of which 74.31% were antepartum, 14.22% were intrapartum and 11.47% were postpartum. 44.04% of cases had no ANC and 40.36 irregular ANC. Occurrence of onset of eclampsia at <34 weeks GA 27.53%, 35-37 weeks 43.12 % and >38 weeks 29.35%. Most of patients were from rural area (97.50%) and having low socioeconomic status (83.94%) and illiterate. Out of 218 cases 46.33% patients had vaginal delivery, 3.21% patients had vaginal delivery with instrumentation.*
Conclusion: *The result of this present study indicates the great need for improved health education, as most cases of eclampsiawere due to ignorance and neglect. There is also a need for expansion of education and training personnel in order torecognize the high risk factors diagnose and manage preeclampsia and eclampsia as early as possible so that the severe form of the disease is prevented.*
Key Words: *Eclampsia, Maternal and Perinatal outcome, preeclampsia*

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I. Introduction

Eclampsia is defined as the development of convulsions and/or coma unrelated to other cerebral conditions during pregnancy or in the post-partum period in patients with signs and symptoms of pre-eclampsia after 20weeks of gestation.

It is a pregnancy specific disease characterized by convulsions associated with pre-eclampsia, sometimes progressing into a multi-organ disease, cluster of varying clinical features. Eclampsia occurs more commonly in the last trimester of pregnancy and becomes increasingly more frequent near term. Convulsions may occur ante-partum (38%) intra-partum (18%) or post-partum (44%). Primigravida are at a higher risk of convulsions and antepartum convulsions are more dangerous than those beginning after delivery.

The etiology of eclampsia is multifactorial.The risk factors for development of eclampsia include genetic predisposition, abnormal trophoblastic invasion, nulliparity, family or past history of preeclampsia and eclampsia, poor outcome of previous pregnancy,lower socioeconomic status, hydatiform mole, fetal hydrops, primigravida and multifetal gestation [2]. Co-morbid conditions like essential hypertension, renaldiseases, diabetes mellitus and many autoimmune diseases (APLA, SLE etc) may also increase the risk of eclampsia. The diagnosis of eclampsia is secure in the presence of generalized edema, hypertension, proteinuria, and convulsions. However, women in whom eclampsia develops exhibit a wide spectrum of signs, ranging from severe hypertension, severe proteinuria and generalized edema to absent or minimal hypertension, no proteinuria, and no edema.Common signs and symptoms associated with eclampsia include persistent occipital

or frontal headaches, blurred vision, photophobia, epigastric and/or right upper-quadrant pain, and altered mental status.

II. Materials And Methods

This study was done on "Maternal and Perinatal outcomeof eclampsia in a tertiary care centre" (KMC & GGH) fromJanuary 2018 to December 2018. The study was conductedin Obstetrics and Gynecology Department, Kurnool MedicalCollege Kurnool, AP, India. The present study aims todetermine the factors affecting the maternal and perinataloutcome of eclamptic mothers.

Women with other causesof convulsions were excluded.It was an observational study. Patients with eclampsia wereadmitted through emergency. Inclusion criteria was thepatients developing eclampsia in second half of pregnancyor within ten days after delivery; and exclusion criteria waspatients with convulsion due to epilepsy, cerebral cause,malaria or any other metabolic cause and patientspresenting ten days or more after delivery.

A detailed history was taken from attendants or frompatient (if conscious and well oriented in time and space),regarding gestational age, or time passed after delivery,number of convulsion and their nature, history of raisedblood pressure, proteinuria, swelling of feet, headache,epigastric pain, visual disturbances, vomiting, urinaryproblem or bleeding per vaginum. A thorough generalphysical and systemic examination was performed,recording blood pressure, pulse, temperature, edema,jaundice and pallor. Lungs and heart were auscultated tonote any abnormalities. Reflexes were checked. Obstetricalexamination included abdominal examination to determinelie and presentation of fetus, amount of liquor, any elementof intrauterine growth retardation and fetal heart rate (ifalive). Vaginal examination performed to note degree ofcervical dilatation, effacement, station of presenting partand pelvic capacity. Mode of delivery (vaginal / abdominalroute) was decided according to the bishop score, patient'scondition and fetal condition. After delivery patients wereobserved in intensive care unit for 24-48 hours and patientswere followed up for complication for up to ten days. Allof these information's were recorded on a Performa. Labinvestigations included: Blood group and Rh factor,complete blood examination, platelet count, serumelectrolytes, serum urea, serum creatinine, serum uric acid, Liver function tests, complete urine analysis, 24 hoursurinary protein estimation and Ultrasonography.Informed consent was taken from everypatient who had taken part in the study.

III. Results

During the study period there were 218 women witheclampsia among 15677 deliveries (1 in 72 deliveries).Theincidence of eclampsia in Kurnool Medical College during the study period was 1.39%. All these patients were treatedwith magnesium sulphate by Prichard regime. 98% wereunbooked, 6 (2.75%) gave previous history of PIH and 2(0.92%) gave history of eclampsia. It is important to notethat the classic triad used to diagnose pre-eclampsia wasnot present in all women with eclampsia. 3.21% cases werebetween 15-19 years of age , 63.30% cases were between20-24 years of age , 26.61% were between 25-29 years ofage, 6.42% were between 30-34 years of age and 0.46%cases were of 35 years and above.83.48% cases wereprimigravida, 11.92% were second gravidae,1.37 % werethird gravidae and 3.23% of cases were fourth gravidaeand above.

74.31% cases were antepartum, 14.22% were intrapartumand 11.43% were postpartum. 5.50% of cases werebetween 20-28 weeks of gestation age, 22.03% of caseswere between 29-34 weeks of gestation, 43.12% werebetween 35-37 weeks, 25.23% were between 38-40 weeksand 4.12% were >40 weeks of gestation. 15.60% of caseshad regular ANC, 40.36% had irregular ANC and 44.04%had no ANC. 97.25% of cases were from rural area and2.75% were from urban area. 37.61% of cases wereilliterate, 27.08% had primary education, 31.19% had highschool education, 1.83% had plus two education and 2.29%were graduate. 83.94% of cases were from lowersocioeconomic status, 15.14% of cases were from middlesocioeconomic status and 0.92% of cases from uppersocioeconomic status. 62.39% of the cases were referredfrom specialist, 30.28% referred from FRU and 7.33%were not referred**.** 44.04% cases were conscious duringadmission, 49.08% were conscious but disoriented and 6.88were unconscious.

S.No	Blood Pressure (mm hg)	No of cases	Percentage	Maternal death
1	>160	93	46.5	6
2	140-160	60	30	1
3	<140	43	21.5	3
4	Not recordable	04	2	3
5	Total	200	100	13

Table 1: Systolic blood pressure at the time of admission

S.No	Blood Pressure (mm hg)	No of cases	Percentage	Maternal death
1	**>160**	**93**	**46.5**	**6**
2	**140-160**	**60**	**30**	**1**
3	**<140**	**43**	**21.5**	**3**
4	**Not recordable**	**04**	**2**	**3**
5	**Total**	**200**	**100**	**13**

Table 2: Diastolic blood pressure at the time of admission

S.No	Parity	No of cases	No of Deaths	CFR (%)
1	**Primigravida**	**182**	**7**	**3.84%**
2	**Multigravida**	**36**	**6**	**16.67%**
3	**Total**	**218**	**13**	**5.96%**

Table 3: Maternal mortality in relation to parity

S.No	Type of Eclampsia	No of cases	No of Deaths	CFR (%)
1	**Antepartum**	**162**	**11**	**6.79%**
2	**Intrapartum**	**31**	**1**	**3.22%**
3	**Postpartum**	**25**	**1**	**4.0**
4	**Total**	**218**	**13**	**5.96%**

Table 4: Maternal mortality in relation to type of eclampsia

S.No	Morbidities	No of cases	Percentage
1	Cerebral hemorrhage	6	2.75
2	Pulmonary Edema	18	8.25
3	Acute renal failure	30	13.76
4	Shock	12	5.50
5	Hellp Syndrome	10	4.59
6	jaundice	17	7.80
7	Cardiac failure	2	0.91
8	Septicemia	18	8.25
9	Pyrexia	34	15.60
10	PPH	28	12.84
11	DIC	14	6.42
12	ARDS / aspration pneumonia	2	0.90
13	Abruptio placentae	15	6.88
14	Acute hepatic failure	4	1.83
15	Retinal oedema, blindness	8	3.67

Table 5: Maternal morbidity due to eclampsia

Out come	Number of cases	Percentage
Live birth	161	75.59
Still birth	46	21.60
Not delivered	6	2.81
Total	213	100

Table 6: Perinatal outcome in eclampsia

Out come	Number of cases	Percentage
Still birth	46	73.10
Early Neonatal Death	17	26.98
Perinatal Death	63	100

Table 7: Perinatal deaths in eclamptic patients

Cause of Death	Number of death	Percentage
Preterm	7	36.84
Birth asphyxia	11	57.89
IUGR	1	5.26
Total	19	100

Table 8: Risk factors associated with neonatal death

IV. Discussion

The incidence of eclampsia in our study was 13.9/1000deliveries i.e. 1.39 %, which is less than that described byRajashri et al (1.82%), more than Sunitha TH (0.7%).However, the incidence of eclampsia is much higher thanthat of developed countries like the United Kingdom (UK)where eclampsia complicates 0.05% of total deliveries.

The incidence of eclampsia in Eastern India as quoted bySingh et al is 3.2% which is higher than ours. Eclampsiawas more commonly seen in young pregnant women(66.5%) and primigravidas (83.48%) which is similar to astudy done by Sunita TH et al (85% and 79%).95% ofpatients of eclampsia in our hospital were not booked withus. 44% of patients had no antenatal care and around 40%of patients had some sort of antenatal care.

Lack ofantenatal care is one of the important risk factors for thedevelopment of eclampsia which is proved by manystudies. 93.99% of patients had no ANC as per Jain S et aland 76.66% had no ANC as per Swain S et al. Accordingto studies conducted in developed countries, the percentageof eclampsia considered to be unpredictable ranged from31% to 87% and this is because of atypical presentation ofeclampsia i.e. abrupt onset, development of convulsionswhile receiving prophylactic Mgso4 or onset of convulsionsafter 48 hours of delivery or in patients withouthypertension or proteinuria.

But in developing countries,the preventable causes of eclampsia contribute to mostcases of eclampsia because of poor ANC services. In ourstudy 74.31% of eclampsia were antepartum, 14.22% were intrapartum and 11.47% were postpartum. In UK, 44% ofeclampsia were postpartum and had lower incidence ofantepartum eclampsia which could be due to good ANCsurveillance. Pathogenesis of postpartum eclampsia is lessunderstood. Ecalmpsia was seen in 49% of patients at termgestation in our study which is similar to a study done byKhanum M et al i.e. 53% at term gestation and 43% at nearterm gestation.

V. Conclusion

The result of this present study indicates the great need for improved health education, as most cases of eclampsiawere due to ignorance and neglect. There is also a need for expansion of education and training personnel in order torecognize the high risk factors diagnose and manage preeclampsia and eclampsia as early as possible so that the severe form of the disease is prevented.

References

[1]. Iozza I, Cianci S, Di Natale A, et al. Update on systemic lupus erythematosus pregnancy.Journal of Prenatal Medicine. 2010;4(4):67-73.
[2]. Sibai B M.Eclampsia .VI. Maternal-perinatal outcome in 254 consecutive cases. AmJ Obstet Gynecol 1990; 163: 1049–55.
[3]. Hosley CM, McCullough LD. Acute Neurological Issues in Pregnancy and the Peripartum.The Neurohospitalist. 2011;1(2):104-116.
[4]. Zhang J, Meikle S, Trumble A. Severe maternal morbidity associated with hypertensive disorders in pregnancy in United States, Hypertension in Pregnancy 2003; 22:203-127.
[5]. MacKay A P, Berg C J, Atrash H K. Pregnancy-related mortality from preeclampsia and eclampsia. Obstet Gynecol 2001; 97:533–8.
[6]. Katz V L, Farmer R, Kuller J. Preeclampsia into eclampsia: toward a new paradigm. Am J Obstet Gynecol 2000; 182: 1389-96.
[7]. N. Hinduja, J. Shah, V. P. Singh K.E.M. Hospital, Parel. Eclampsia in India. The National Medical Journal of India 1991; VOL. 4, NO.4 pg 170-1741.
[8]. Moller B, Lindmark G. Eclampsia in Sweden, 1976–1980. Acta Obstet Gynecol Scand 1986; 65:307–14.
[9]. Choudhary P. Eclampsia : a hospital based retrospective study Medical Journal (2003) Vol. 1, No. 4, Issue 4, 237-241.
[10]. Tukur A Jido. Ecalmpsia: maternal and fetaloutcome. African Health Sciences 2012; 12(2): 148 -152
[11]. Dr. M. Vijayasree. M.D.,OBG., and Dr. G. V. Murali., Mch. A Clinical study of perinatal and maternal complications in Eclampsia in a tertiary care Referral Centre-A Near Miss Obstetric catasthrope. International Journal of Advanced Multidisciplinary Research (2015): 2(4): 80–85.

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