Research Paper

Volume : 2 | Issue : 7 | July 2013 • ISSN No 2277 - 8179

Eclampsia: Maternal & Fetal Threat

Medical Science

KEYWORDS : Eclampsia, perinatal, DIC and ARF.

Dr. Arti J. Patel — Professor & Head of unit, Obstetrics & Gynaecology, Smt. N.H.L Municipal Medical College, Ahmedabad.

Dr. Jayvir M. Parmar — 3rd year resident, Obstetrics & Gynaecology, Smt. N.H.L Municipal Medical College, Ahmedabad.

ABSTRACT

Eclampsia is one of the leading cause of maternal and perinatal morbidity & mortality. This clinical observational study comprises 50 patients presenting with eclampsia in Obstetrics & Gynaecology Department at tertiary health care centre during the period from May 2012 to April 2013. In present study eclampsia is commonly seen in age group 20-30 years (56%), most commonly in primigravida patients (78%), majority of cases seen during antenatal period (72%). Caesarean sections (56%) were done in cases of failed trial of labour, associated fetal malpresentation and uncontrolled maternal hypertension to reduce maternal and fetal complications. Maternal mortality in present study is 8% among that 4% of deaths occurred due to DIC and ARF. Meconium aspiration, septicemia, prematurity and birth asphyxia are common causes for perinatal mortality (12%). Anticipation of eclampsia in cases of severe PIH and its proper management decreases incidence of eclampsia, maternal & perinatal complications and improves its outcome.

INTRODUCTION:

Eclampsia is defined as a new onset of grand mal seizure activity or coma during pregnancy, labour or post-partum in a woman with signs and symptoms of pre-eclampsia, more than 50 % occur in 3rd trimester of pregnancy. Eclampsia is one of the leading cause of maternal and perinatal morbidity and mortality throughout the world. Though incidence of eclampsia is said to be declined, still a major problem for maternal well being associated with increased risk of abruption of placenta, DIC, ARF & cerebral hemorrhage. Reduction of utero-placental perfusion due to eclampsia, places the fetus at high risk for IUGR, preterm birth and perinatal mortality. Mainstay of management of eclampsia is stabilization of maternal condition followed by early delivery to reduce maternal and perinatal morbidity and mortality. The present study was done to determine maternal and fetal outcome in cases of eclampsia.

AIMS & OBJECTIVES:

1. To evaluate incidence of eclampsia in relation to age, parity and gestational age and associated risk factors.
2. To study complications, management and mode of delivery in patients of eclampsia.
3. To study maternal & perinatal morbidity and mortality.

METHODS:

This study comprises 50 patients presenting with eclampsia in Obstetrics & Gynaecology department at tertiary health care centre during the year May 2012 to April 2013. All cases were admitted as indoor patients.

Detailed history were taken including age, parity, prior registration, frequency of convulsion with duration and interval, stage of pregnancy (antepartum, intrapartum or postpartum period), history of eclampsia in previous pregnancy. Mode of delivery and management, maternal & perinatal morbidity and mortality was analyzed in present study.

EXCLUSION CRITERIA:

1. Known cases of epilepsy or patients on anticonvulsant drugs.
2. Other psychiatric illness.

OBSERVATION & DISSCUSSION:

In present study 88% patients were emergency cases, with history of 1 or 2 convulsions for 30-60 seconds at 10-15 minutes apart at home or at primary health centre. Increase in arrival of eclamptic patients at tertiary health care centre may be due to availability of better health care facilities with emergency intensive care unit or because of implementation of maternal health beneficiary schemes at tertiary health care centre by government like Janani and Shishu Suraksha Yojana Karyakram (JSSK).

In present study highest incidence of patients with eclampsia noted in age group 20-30 years (56%). Next comes below 20 years(30%).Which is comparable to S.SINGH, A.K.BAOHRA et al(2011) age group 20-30years(53.8%) & below 20 years (44.3%).

In present study antepartum and intrapartum eclampsia was 92% among those 52% had convulsion after 32 weeks, suggesting more incidence near term pregnancy.

TABLE NO.1 DISTRIBUTION AMONG PARITY

PARITY	NO.OF PATIENTS	PERCENTAGE (%)
Primi	39	78
Second	8	16
Multi	3	6

This indicates eclampsia is commonly seen in primigravida. Exact mechanism is still unknown but according to SIBAI (2003) possible causes includes abnormal placentation, immunological factors in fetus from paternal side & genetic influences etc.

TABLE NO.2 TYPES OF ECLAMPSIA

TYPE	NO. OF CASES	PERCENTAGE
Antepartum	36	72%
Intrapartum	10	20%
Postpartum	4	8%

The study shows highest incidence during antepartum period (72%), which is comparable to study by S.SINGH, A.K BOHRA et al (2011) where incidences are antepartum (59.4%), intrapartum (22.2%), postpartum (18.4%).

2 out of 11 patients had history of PIH in previous pregnancy. No patient had history of eclampsia in previous pregnancy.

TABLE NO.3 MODES OF DELIVERY

MODE OF DELIVERY	NO. OF CASES	PERCENTAGE
Vaginal delivery	22	44%
Caesarean section	28	56%

Which is comparable to study by OLAKUNLE et al (2008) vaginal delivery (46.30%), caesarean section (53.7%). Higher caesarean section rate (56%) in present study may be due to failure of induction & NPOL to decrease duration between onset of convulsion and delivery & to improve feto-maternal outcome.

TABLE NO.4 BABY OUTCOME

	Preterm=21			Full term=29		
	IUD	Live birth	Still birth	IUD	Live birth	Still birth
No. of cases	6	13	2	4	24	1
Percentage	12%	26%	4%	14%	42%	2%

Among 13 live preterm babies, all were admitted in NICU. Out of these 4 babies were expired due to low birth weight, septicemia, prematurity and birth asphyxia.

Out of 24 live full term babies, 5 babies were admitted in NICU. Out of these 2 babies were expired due to meconium aspiration syndrome. 1 out of 2 expired babies was delivered to patient with status eclampticus.

Neonatal mortality rate
=4+2

= 6 (12%)

Which is similar to study by J.TUKUR, B.A UMAR et al (2007) (13%).

PERINATAL MORTALITY RATE
= IUD+SB+NMR

= 10+3+6

= 19 (38%)

Which is comparable to study by KUMAR MAJHI et al (2011) (39.9%) & ONWUHAFUA et al (2006) (40.9%).

TABLE NO.5 MATERNAL MORBIDITY & MORTALITY:

Causes of death	No. of cases	Percentage
DIC, ARF	2	4%
PPH, Hemorrhagic Shock	1	2%
Status eclampticus	1	2%
Total deaths	4	8%

Maternal morbidity spectrum is quite variable ranging from blurring of vision, septicemia, oligouria, DIC, ARF, convulsion, coma & cerebro-vascular accidents. In current study MRI study with venography of brain were done over 5 patients, who had prolong altered sensorium or status eclampticus, 4 out of 5 patients were diagnosed as Posterior Reversible Encephalopathy Syndrome(PRES), who didn't have any past history of convulsion or trauma. 4 out of 5 patients were primigravida between 20-30 years of age group. Prognosis is good in these kind of patients with PRES if it is not superimposed by secondary complications. All 4 patients were sent home without any significant cognitive or functional impairment.

In present study maternal mortality rate is 8%. It was similar to study by S.SINGH, A.K BOHRA (2011) (10.44%) & KUMAR MAHJI (2011) (11.28%).

DIC & ARF were most common causes for maternal mortality.

Maternal deaths(2) in present series would have been prevented by early hospitalization, timely interventions ,providing emergency obstetric health care at primary health centre and above all by increasing awareness of antenatal patients for regular health check-up.

CONCLUSION:
Eclampsia is not a totally preventable disease but incidence can be decreased by prediction and early diagnosis with proper antenatal care.

Early diagnosis and its proper management improve maternal & perinatal outcome.

MgSO4 therapy is considered as the best therapy in prevention and control of convulsions in cases of eclampsia, if used cautiously.

If vaginal delivery fails after induction of labour, caesarean section is preferable for better feto-maternal outcome.

Termination of pregnancy after stabilization of maternal condition and decrease duration of labour is general policy for eclampsia.

ABBREVATIONS:
DIC-Disseminated intravascular coagulation

ARF- Acute renal failure

NPOL- Non progress of labour

PIH- Pregnancy induced hypertension

IUGR- Intrauterine growth retardation

SB- Still birth

IUD- Intrauterine fetal death

MgSO4- Magnesium sulphate.

NMR- Neonatal mortality rate

PPH-Post partum hemorrhage

NICU- Neonatal intensive care unit

REFERENCE

1. J.Tukur, B.A Umar, R.Rabi U. Annals of African medicine volume 6, no.4; 2007: 164-167 | 2. Olakunle Kusemiju MBBS: The internet journal of third word medicine.2008, vol. no.6 | 3. Kumar Majhi A. Sarathy Chakraborty P, Mukhopadhyay A. Eclampsia; present scenario in a referral medical college, Calcutta, J.Obstet gynecol india 2000;50;128-132. | 4. S.Singh, A.K Bohra et al(2011) | 5. Sibai BM, diagnosis, prevention and management of eclampsia Obst.& Gynesol 2005 Feb;105(2) | 6. Onwuhafua Pl. Onyntyo A : perinatal mortality associated with eclampsia in Kaduna, Nigeria Niger J. Med.2006;Oct-Dec.15(4):397-400