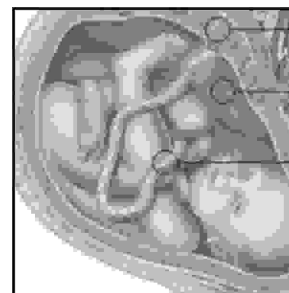


ORIGINAL

PROF-910

# ECLAMPSIA

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**ABSTRACT** ... [drshahidasheraz@hotmail.com](mailto:drshahidasheraz@hotmail.com) **Objective:** To evaluate incidence, morbidity and mortality associated with eclampsia. **Design:** A prospective study. **Place and Duration:** The study which was carried out at PAF Hospital Rafiqui, Shorkot spanned over a period of 2½ years from Jun 2002-Dec 2004. **Patients and Methods:** The study comprises of 55 eclamptic cases diagnosed out of 3391 consecutive deliveries, carried out in our hospital. **Results:** The incidence of eclampsia, in this study, was found to be 1.62%. Out of 55 cases 38(69.1%) patients were primigravida. Forty three (78.2%) of the patients were between the ages of 21 to 30 years. In 50(90.9%) patients gestational age was less than 35 weeks. Thirty seven (67.3%) cases had antepartum eclampsia. Forty four (80%) patients received diazepam while the remaining 11(20%) received magnesium sulphate (MgSO<sub>4</sub>) as anticonvulsant. Commonest mode of delivery was spontaneous vaginal delivery (31 cases, 56.4%) followed by lower caesarean section (21 cases, 38.2%). Fetal loss was seen in 12(20.7%) cases. Two patients died of eclampsia, maternal mortality rate being 3.6%. **Conclusion:** Eclampsia is a life threatening complication of pregnancy. However an improvement in antenatal care, upgrading the neonatal facilities and early delivery by cesarean section can improve the perinatal outcome.

**Key Words:** Eclampsia, Magnesium Sulphate, Convulsions, Primigravida.

## INTRODUCTION

Eclampsia is a potentially fatal disorder of pregnancy with a significant maternal and fetal morbidity and mortality rate<sup>1</sup>. It is characterized by hypertension, protein-urea, with or without edema, associated with seizures either during pregnancy or within ten days of delivery<sup>2</sup>.

Eclampsia is preceded by alarming symptoms and sign of pregnancy induced hypertension (PIH). Early detection of signs and symptoms by good antenatal care and initiation therapy will prevent occurrence of eclampsia.

In UK, the incidence of eclampsia is 4.9/10,000 and in USA it is 4.3/10,000 deliveries<sup>3</sup>. Unfortunately, eclampsia

still complicates much larger number of pregnancies in the third world<sup>4</sup>. In India, its incidence is reported to be 220/10,000 and in Pakistan it is 120/10,000 deliveries<sup>5,6</sup>. Incidence of eclampsia varies inversely with the quality of antenatal care. It is estimated that about 13% of maternal mortality is associated with hypertensive disorders of pregnancy, particularly eclampsia<sup>7</sup>.

### AIMS AND OBJECTIVES

The aims and objectives of the study were to evaluate the incidence of eclampsia, its management and perinatal and maternal morbidity and mortality associated with, it in our institution.

### PATIENTS AND METHODS

This study was conducted in PAF Hospital Shorkot, which besides Shorkot, also provides medical facilities to a vast area including Toba Tek Singh, Pir Mahal, Kamalia and Abdul Hakeem. A specially designed performa was used to record the relevant data of each patient. It took into account the demographic variables such as age, socioeconomic status, parity, gestational age at presentation, time of onset of eclampsia, mode of delivery, use of drugs (especially anticonvulsants), maternal and perinatal outcome.

All the patients admitted in the hospital during this period of 2½ years with eclampsia were included in the study. Our sample size was 55 patients.

All the patients included in the study were evaluated by detailed history, through physical examination, including fundoscopic examination of the eyes and relevant laboratory investigations like blood complete picture, platelet count, coagulation profile, renal function tests, serum electrolytes, uric acid, blood glucose level and urine protein examination. All the patients with eclampsia were managed according to the following guidelines;

Immediate treatment of the convulsion.

Control of blood pressure.

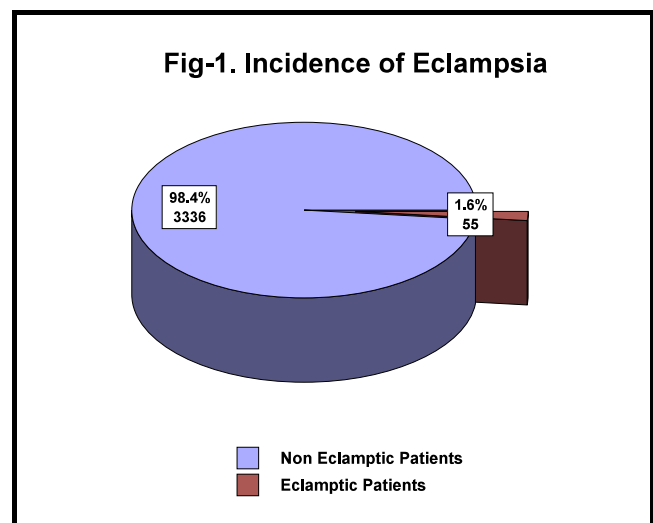
Stabilization of general condition of the mother and delivery of the fetus as soon as the mother is stable, irrespective of the gestational age of the fetus.

Convulsions were controlled by diazepam (10mg given i/v, stat at the start of convulsion), which was continued till 24 hours after delivery or till 24 after the last convulsion in case of post-partum eclampsia. Blood pressure (when the diastolic pressure exceeded 100 mg Hg) was controlled, with i/v methyldopa or sublingual nifedimine. Vital functions, fluid intake and urine output and tendon reflexes were monitored closely.

Eleven (20%) patients received MgSO<sub>4</sub>, in 12 cc of distilled water in 20 cc disposable syringe, was administered i/v over 20 minutes and 3gm given into each buttock intramuscularly. Maintenance dose of 2.5gm given i/m every 4 hours was continued for 24 hours after the last fit. Monitoring included respiratory rate to be over 16 breaths/min, urine output to be more than 30 ml/hour and presence of patellar reflex.

### RESULTS

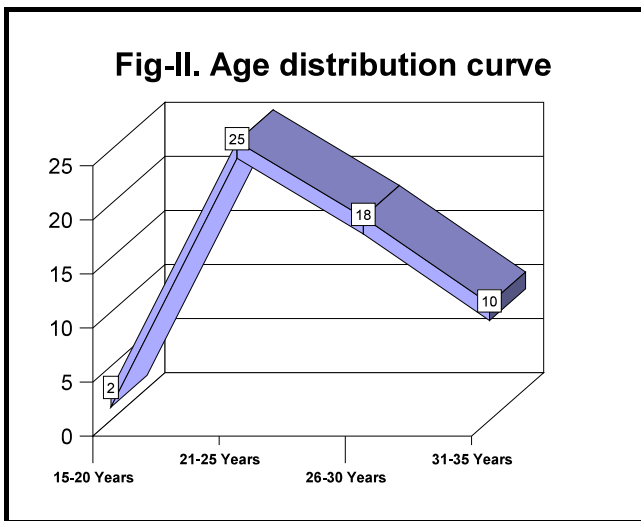
A total of 3391 deliveries were carried out during the period of study. Out of these 55 were diagnosed to be suffering from eclampsia and were treated accordingly. The incidence of eclampsia in our study, thus, turns out to be 162/10,000 (1.62%) deliveries Fig-1.



Most of the cases in our study (92%) were unbooked and have received either inadequate or no antenatal care at all. Majority of the patients (69.1%) were primigravida Table- I.

Parity	No. of patients	%age
Primigravida	38	69.1%
Multigravida	17	30.9%

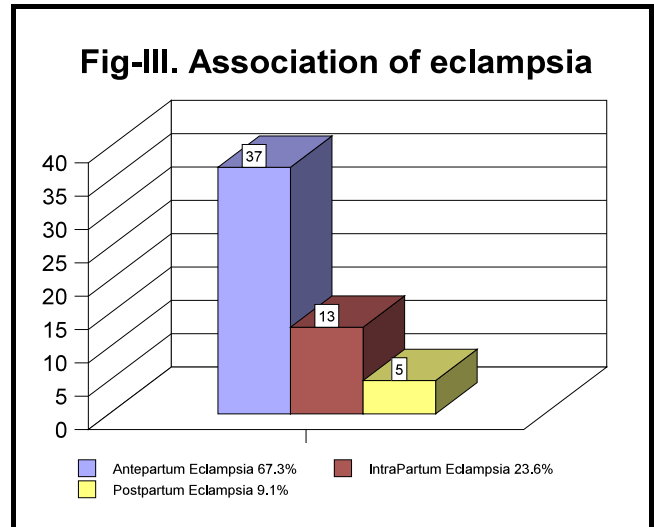
Out of 55 patients, 43(78.2%) were between 21 to 30 years of age Fig-II.



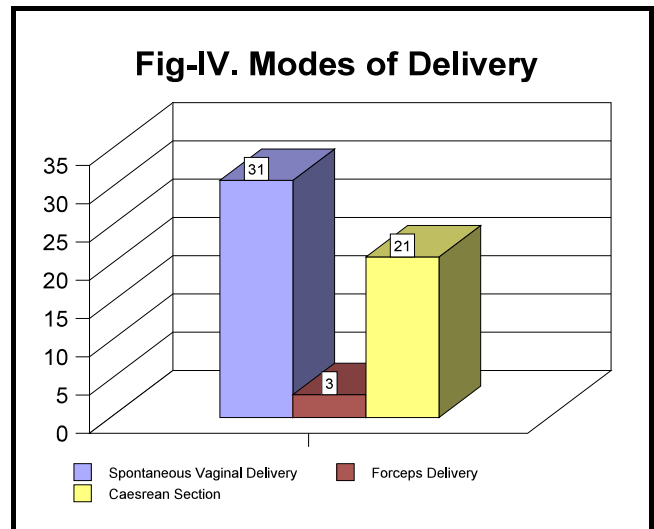
Gestational age at the time of admission varied from 26 weeks till term Table- II.

Gestational age (weeks)	No. of patients	%age
25-30	37	67.3%
31-35	13	23.6%
36-40	5	9.1%

Thirty seven of the patients (67.3%), presented with antepartum, 13(23.6%) with intrapartum and only 5(9.1%) of the patients presented with postpartum eclampsia Fig-III.



Spontaneous vaginal delivery was the commonest mode of delivery carried out in 31(56.4%) patients, forceps delivery was performed in 3(5.4%) and caesarean section was done in 21(38.2%) patients, indications being induction failure or obstructed labour Fig-IV.



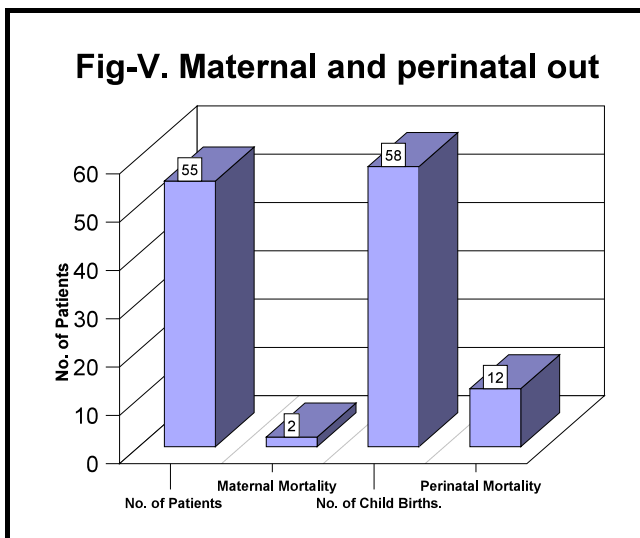
Fits were controlled with diazepam infusion in 44(80%) of the patients. In rest of the 11(20%) cases MgSO<sub>4</sub> was used as anticonvulsant drug.

Pulmonary complication were seen to be the most common complication associated with eclampsia. These included aspiration pneumonia, pulmonary edema, and adult respiratory distress syndrome (ARDS). These were

followed by cardiovascular accidents (%), DIC (%), and HELLP syndrome (%).

There were 2 maternal deaths, one owing to ARDS and other to DIC. Case Fertility Rate (CFR) was 3.6% Table-III & Fig-V .

Cause of death	No. of patients	%age
Pulmonary complication	1	50%
DIC	1	50%



Total number of births in our series was 58(52 were singleton and three were twins).

Causes of death	No. of patients	%age
Prematurity	5	41.6%
Birth Asphyxia	3	25%
IUGR	2	16.7%
Mecovium aspiration	2	16.7%

Twelve perinatal deaths were recorded; perinatal mortality rate was 20.7%. There were still births (33.3 of

the total perinatal mortality) and 8 early neonatal deaths (66.6 of the total perinatal mortality). Prematurity contributed to 5, birth ashyxia to 3, while meconium aspiration and intrauterine growth retardation (IUGR) each accounted for 2 of the perinatal fatal outcomes Table-IV & Fig-V.

## DISCUSSION

Eclampsia remain one of the leading causes of maternal and perinatal mortality. The incidence of eclampsia, as evaluated in this study, is 1.62%. The reported incidence from India is 1.56%<sup>8</sup>. In England and America the incidence is quite low i.e., 0.72% and 0.28% respectively<sup>9</sup>. In Pakistan, an incidence of 1.8% and 0.2% has been reported from Nishter Hospital Multan and Civil Hospital Karachi, respectively<sup>10,11</sup>. These figures are comparable with our study.

The age distribution of patients in our study is similar to other reports and suggests that eclampsia is, probably, a disease of young women<sup>10,12</sup>.

Gravidity also influences the incidence of eclampsia. Primigravida are more likely to develop eclampsia compared with the multigravida.

In our study 37(67.3%) patients had antepartum eclampsia. This is in accordance with the results of most studies<sup>13</sup>. Antepartum eclampsia is strongly related to preterm eclampsia, and hence, is also associated with increased risk of perinatal complications and smaller gestational age with worse prognosis<sup>14</sup>.

In 11(20%) cases, MgSO<sub>4</sub> was used as anticonvulsant. No significant side effects were observed and the results proved superior to diazepam in terms of recurrence of seizures<sup>15</sup>.

Perinatal mortality was 20.7%, with prematurity as the major risk factor. Case fertility rate in our study was 3.6% which is comparable with most of the other studies.

However, we believe that with advances in antenatal and neonatal care, electronic monitoring and appropriate

timing of delivery, the perinatal outcome can be improved.

## CONCLUSION

Eclampsia remains a continuing problem in developing countries. However an improvement in the antenatal care, early management of the pregnancy induced hypertension thus preventing premature labour, early delivery by caesarean section and upgrading neonatal facilities can improve the maternal as well as perinatal outcome.

This calls for coordinated efforts and close involvement of the community, governmental/non-governmental organizations, doctors, nurses and the paramedical staff.

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