PRESENTATION AND MANAGEMENT OUTCOME OF ECLAMPSIA AT AYUB TEACHING HOSPITAL, ABBOTTABAD

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Background: This study was carried out evaluate to epidemiology, clinical presentation and prognostics aspects of patients presenting with eclampsia. **Methods:** This study was carried out at Gynae "C" unit of Ayub Teaching Hospital Abbottabad from 1st July 2003 to 31st October 2004. All patients presenting with eclampsia to the labor ward were included in the study. The diagnosis was based on history and confirmed on clinical findings of hypertension, oedema, proteinuria superimposed with fits. Patients with history of fits during pregnancy, labor and peurperium other than eclampsia were excluded from study. History physical findings and base line investigation were recorded on a proforma. **Results**: A total of 2100 admissions were made in the labor ward during this period and out of them 68 cases (3.23 %) were of eclampsia. Out of them 28 were primigravidae, 14 multigravidae and 26 grandmultigravidae. The seasonal frequency of cases was 29.41% in winters, 42.64% in autumn, 19.11% in summers and 8.82% in spring. Out of these 11.76% cases were complicated with retroplacental haemorrage and the same number with aspiration pneumonia, while Cerebrovascular Accident (2.94%) Acute tubular necrosis (2.94%) and Disseminated intravascular clotting (4.4%) were also seen. Among the new borns prematurity was found to be the major cause of perinatal mortality. **Conclusion:** Eclampsia is a dreadful complication of Pre Eclamptic Toxemia of pregnancy associated with high perinatal and maternal mortality. A qualitative and quantitative improvement in prenatal consultation should make it possible to reduce incidence of eclampsia measuring arterial blood pressure daily during antenatal period and for at least 14-days postpartum appears to be necessary for diagnosis and treatment for all cases of hypertension.

Keywords: Eclampsia, PET, Pregnancy

INTRODUCTION

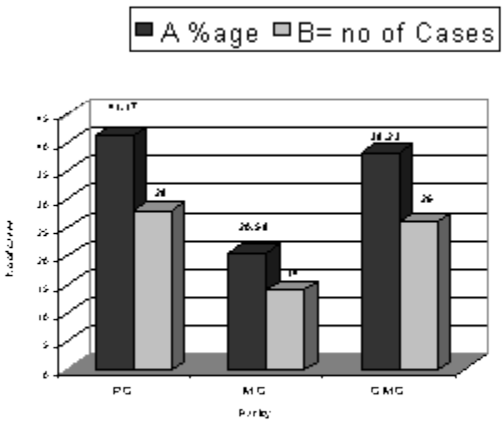
Eclampsia is defined as the occurrence of convulsions associated with signs of pre-eclampsia (hypertension and proteinuria) during pregnancy labor or with in 7-days of delivery and not caused by epilepsy or other convulsive disorders. Its incidence varies widely from 1 in 100 to 1 in 2000 pregnancies.[1] Eclampsia occurs in 1-2% of women with pre-eclampsia in developed countries.[2] Hypertensive disorders are a leading cause of maternal mortality. The death rate from eclampsia in UK is 2%.[3] Eclampsia is a common cause of Iatrogenic prematurity in new borns.

Convulsions may occur antepartum (38%) intrapartum (18%) or postpartum (44%).[3] Primigravida are at higher risk of convulsions and that antepartum convulsions are more dangerous then those beginning after delivery.[3,4] Magnesium Sulphate is the first line anticonvulsive agent used in the treatment of eclampsia and has been found to be the most effective agent in relation to a number of measures of maternal and perinatal morbidity and in prevention of recurrent convulsion.[5,7] The other mainstay of management case of eclampsia is early delivery to improve the prognosis in terms of reducing maternal and perinatal morbidity and mortality. The purpose of this study was to report the frequency of this lethal pregnancy associated disorder in terms of age, parity, seasonal variation, associated maternal complications and fetal outcome. Also to highlight the lapses of our setup which can be overcome to improve the outcome and to reduce its incidence.

MATERIAL AND METHODS

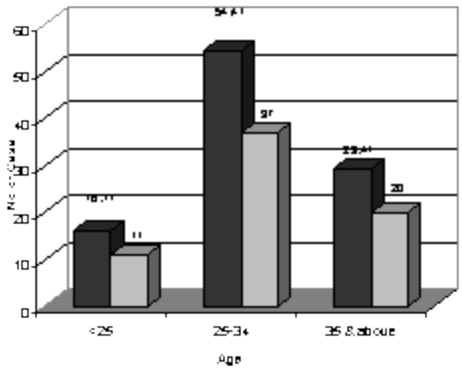
This study was carried out in Department of Obs/Gynae Ayub Teaching Hospital Abbottabad during a period of 15-months from 1st July 2003 to 31st October 2004. All the patients admitted with eclampsia were included in the study.

Inclusion criteria were patients more than twenty weeks gestation with history (taken from attendants) of pre-eclampsia (headache, apigastric pain, nausea, vomiting, rapidly increasing generalized body swelling, hypertension, proteinuria, odema and superimposed convulsions. Patients of all reproductive age group and parity ranging from teenager primigravida to older grandmultigravida were included. Pregnant patients with other convulsive disorders and more than 7-days postpartum were excluded. The clinical findings on admission were recorded on note sheets including lab work up both general and specific for eclampsia. All the patients were managed according to basic protocol for eclampsia I.e stabilization of patients, anticonvulsive therapy MgSO4 and/ or diazepam and early delivery. Management was then evaluated in terms of maternal and fetal outcome. All the patients were followed till six weeks postpartum. The data was then compiled for frequency distribution.



RESULTS

During this period of 15-months a total of 2100 laboring patients were admitted in labor ward and out of them 68 (3.23%) were cases of eclampsia. The frequency of eclampsia nearly came out to be 32 patients per 1000 deliveries. Figures 1 and 2 show age and parity distribution of patients with eclampsia respectively.



Patient's age range was 19 years to 43 years, average 29.54 years. Maximum cases were seen from 25-34 years age groups and at extremes of parity i.e in primigravida and grandmultigravida. Figure-3 shows the number of cases presenting at different period of gestation. Maximum cases were seen at term. Frequency of cases seemed to decrease with decreasing gestation. Only three cases were seen before 28 weeks of gestation and they were all primiparas. Another interesting feature in primiparous patients worse clinical picture on admission with early recovery as compared to multiparous patients in whom recovery was delayed. Another common feature in all these patients were that they belonged to poor socio-economic class, living in far-flung areas and never seeking proper antenatal advice even if living in the areas nearby. Most had a preceding 1 to 7 days history of severe pre-eclampsia especially sudden increase in generalized body swelling. Eclampsia occurred antepartum in 32 (47.05%) cases intrapartum 30 (44.11%) & 6 (8.82%) postpartum. Postpartum cases on an average occurred 6 to 36 hours after delivery.

Figure-1: Distributions of patients (n=68) according to age (weeks)

Figure-2: Distributions of patients (n=68) according to period of gestation (weeks)

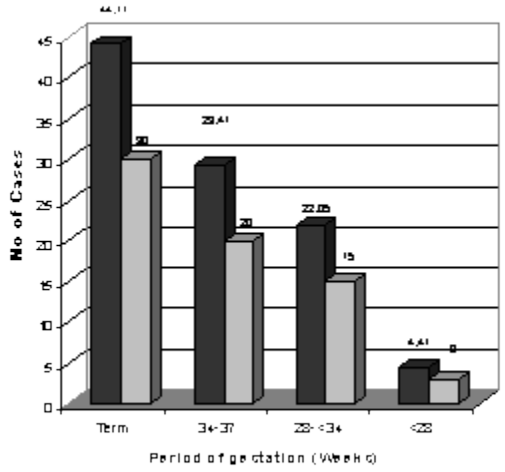


Figure-3: Distributions of patients (n=68) according to period of gestation (weeks)

Complications were observed in 48 (70.58%) out of 68 patients. Aspiration pneumonia was seen in 8 (11.76%), renal insufficiency in 5 (7.35%), Acute Tubular Necrosis (ATN) in 2 (2.94%) and retroplacental haemorrhage in 8 (11.76%) cases. Seven patient died giving a death rate of 10.29%. The perinatal mortality rate was 23.52% with prematurity being the leading cause. The preponderance of male to female fetuses was 1.3 : 1.

Table-1: Clinical Presentation of eclampsia (n=68)

Clinical Presentation	No. of cases (%)
Headache + vomiting	68 (100%)
Epigastric Pain	55 (80.88%)
Generalized body swelling	55 (85.29%)
Hypertension	62 (9.17%)
Proteinuria	68 (100%)
Odema	64 (94.17%)
Convulsions	68 (100%)

Table-2:Complications associated with eclampsia (n=68)

Associated Complications	No. of Cases (%age)
Aspiration Pneumonia	8 (11.76%)
Septicemia	2 (2.94%)
Renal insufficiency	5(7.35%)
ATN	2(2.94%)
Abruptioplacentae	8(11.76%)
CCF	2(2.94%)
DIC	3(4.41%)
HELLP Syndrome	3(4.4%)
IUGR & Oligo hydramnios	15(22.05%)

Table-3 Mode of delivery (n=68)

Mode of delivery	**No. of Cases (%age)**
SVD	25(36.76%)
Vaginal delivery with epsiotomy	4(5.88%)
Vacuum delivery	6(8.82%)
Outletforceps delivery	1(1.47%)
Caesarean Section	29(42.64%)
Hysterotomy	3(4.41%)

DISCUSSION

Eclampsia is the commonest cause of convulsions during pregnancy next being epilepsy (0.5% of pregnancies)[6]. It is uncommon in UK. It is very common in developing countries like Pakistan and Bangladesh as supported by a review carried out in 1996 in Bangladesh [8]. The major cause being major social deprivation and lack of access to trained birth attendants and the incidence of eclampsia in some areas of Bangladesh came out to be 30/1000 which is very close to this study i.e 32/1000. One reason for this high incidence is that mostly uncomplicated labor cases never come to hospital, either deliver at home or in Primary Health Care Centres and only complicated cases reach a tertiary care hospital owing to the poor socio-economic conditions of the general population lack of educational resources. Maximum number of patients were primiparous but unlike study of Douglous and Redman[5] this disorder was not seen very frequently in teenagers but rather more in patients in their twenties (39.70%). Multiparous patients presenting with eclampsia had past history of hypertension as well as babies small for gestational age[9]. When calculated on yearly basis frequency of cases was seen to be increased during winters (29.41%) and Autumn (42.6%) as compared to Summers (19.11%)and Spring (8.82%). This probably reflects the vasospasm induced by cold.

Commonest clinical presentation was typical convulsions superimposed on hypertension and protenuria. Only 6 cases were normotensive on admission. Two patients hypotensive due to over dosage of diazepam prior to admission at some basic health unit. Proteinuria was present in all the cases. Commonest associated maternal complication was aspiration pneumonia (11.76%) in those who had countless fits before arrival to hospital and abruptio placentae (11.76%) in whom BP was more than 180/110 mmHg. One of them required hysterectomy due to couvelaire uterus.

After preliminary management patients were given MgSO4 +/- diazepam parenterally for control of fits followed by quick delivery preferably vaginally or by caesarean section if the delivery was not imminent within 6-8 hours or in cases of maternal deterioration (un controlled fits) fetal distress or other obstetric cause for caesarean section. 47% delivered by abdominal route and rest by vaginal route. Maternal death rate was 10.29% (7-cases) two by septicemia, two by cerebral hemorrhage and three by pulmonary embolism. Few older multipara with eclampsia seen six week post partum continued to have BP above base line as compared to women with normotensive pregnancies[10].

Pernatal mortality rate came out to be 23.52%. The presence of IUGR as expected was associated with reduced risk of survival independent of other variables such as gestation and severity of maternal disease[11].

The following factors have been identified as risk factor for maternal morbidity and mortality: late referral to tertiary hospital, delay in hospital management, lack of transport, unbooked status of patients, high parity, prolong state of unconsciousness and multiple seizures prior to admission[12]. Patients were assessed at 6 weeks postpartum for the presence of residual hypertension, proteinuria and for the return of renal functions to normal, decision making

regarding administration of low dose aspirin in next pregnancy and detection of pre-eclampsia as early as possible to reduce risk of recurrence which varies from 1.9% to 24.9% [13-15].

CONCLUSION

Eclampsia is a very common pregnancy associated disorder in this part of the country. It can be diagnosed very easily on the basis of history and typical clinical features i.e proteinemia, oedema, high blood pressure with superadded fits. Most important feature of management is its prevention by proper antenatal check ups, availability of health facilities and prompt referral to tertiary care hospital, but once it occurs it caries a high maternal and perinatal mortality.

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