

ECLAMPSIA; PERINATAL OUTCOME IN PATIENTS AT NISHTAR HOSPITAL MULTAN

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DR. SAIMA ASHRAF, FCPS

Senior Registrar
Nishtar Hospital Multan.

DR. SAFIA SARWAR, MBBS

Postgraduate Trainee,
Nishtar Hospital Multan.

ABSTRACT... Objective: The objective of this study was to determine the perinatal outcome in patients with eclampsia. **Study design:** Descriptive study. **Settings:** Department of obstetrics and gynecology Nishtar Hospital Multan. **Subject and Methods:** Two hundred and sixty four pregnant ladies admitted in labor ward of Nishtar Hospital Multan diagnosed as eclampsia fulfilling the inclusion criteria were selected. Non probability purposive sampling technique was used. All information like prematurity, intrauterine death, stillbirth, low birth weight, admission to neonatal intensive care unit (NICU) and early neonatal death was recorded on a specifically designed proforma. For perinatal complications ladies were followed for 7 days. Data were entered and analyzed by SPSS-11. **Results:** Out of 6183 admissions 231(3.73%) were eclamptic. Majority of the patients 157(67.96%) were primigravida, 118(51.08%) were in groups 21-30 years. There were 117(50.61%) uneducated patients and 157(67.96%) patients belonged to poor socioeconomic conditions. Only 63(27.27%) were booked cases. Most of the patients 132(57.14%) were diagnosed at gestation less than 37 weeks and 120(51.94%) patients delivered vaginally. Prematurity was the most frequent complication i.e in 131(56.70%) patients observed and 147(63.63%) neonates required admission to NICU due to various reasons. There were 13(5.62%) intrauterine deaths, 29(12.55%) stillbirths and 21(9.09%) early neonatal deaths. **Conclusions:** Eclampsia is still a major threat to the pregnant ladies in our institution and a major cause of perinatal morbidity and mortality. It is mostly preventable by early diagnosis and management of pre eclampsia and hypertensive disease. As stillbirth, prematurity and birth asphyxia are the most important causes of perinatal loss, so in eclampsia early referral of patients, better obstetric management, early resuscitative measures and good neonatal care facilities can improve the perinatal outcome.

Key words: Eclampsia, Antenatal care, Perinatal mortality, Prematurity.

INTRODUCTION

Pregnancies complicated with hypertensive disorders are associated with increased risk of adverse fetal, neonatal and maternal outcome¹. Five classes of hypertensive disorders were identified according to the latest classification system described by National High Blood Pressure Working group (2000) including Pre eclampsia, Eclampsia, Transient hypertension of pregnancy, Chronic hypertension and Pre eclampsia superimposed on chronic hypertension². Differentiating between these groups is mandatory regarding the determination of the best management strategies.

Eclampsia is a well-recognized major cause of maternal death and perinatal morbidity and mortality³. Eclampsia is defined as "occurrence of convulsion not caused by coincidental neurological disease in a woman whose condition meets the criteria for pre eclampsia⁴. Incidence in developed countries like UK is 1/2000 pregnancies⁵. Pre eclampsia is defined as "Hypertension of at least 140/90 recorded on two separate occasions at least 4 hours apart with proteinuria after 20th week of pregnancy in a previously normotensive woman." The clinical

manifestation are hypertension and proteinuria with or without co existing systemic abnormalities involving kidney, liver or blood⁶. There are no reliable clinical markers to predict eclampsia and conversely the neurological symptoms and /or signs are rarely associated with seizures⁷. Eclampsia is associated with adverse perinatal outcome in the form of prematurity, birth asphyxia, respiratory distress syndrome and meconium aspiration syndrome⁸. Eclampsia is a life threatening condition. Magnesium sulphate was found as a safe and effective anticonvulsant in controlling eclamptic fits⁹. However, improvement in antenatal care, updating the neonatal facilities and early delivery by caesarian section can improve perinatal outcome¹⁰. A high frequency of eclampsia and all in unbooked patients show that lack of antenatal care is our major problem¹¹.

The purpose of this study was to determine perinatal outcome in patients with eclampsia. This study also provides new statistics regarding perinatal outcome and will provide valuable information to plan strategies for better perinatal outcome.

MATERIAL AND METHODS

It was a descriptive study carried out at Department of Obstetrics and Gynecology Unit -1 Nishtar Hospital Multan. Duration of study was from 15-4-2010 to 14-10-2010. Non-probability purposive sampling technique was used. Study was conducted after permission from ethical committee of the institution. Two hundred and sixty four pregnant ladies admitted in labor ward of Nishtar Hospital Multan diagnosed as eclampsia fulfilling inclusion criteria were selected. Informed consent was taken from each patient. Patients with neurological diseases like epilepsy, cerebrovascular accident, space occupying lesions, multiple gestations were excluded from the study by history, examination and investigations including obstetrical ultrasonography and CT scan of brain.

Patients included in the study were evaluated by history, examination, relevant investigations including obstetrical ultrasonography and cardiotocography for fetal assessment after patient stabilization. Mode of delivery was decided taking in account of maternal and fetal condition under pediatrics cover.

RESULTS

Total number of antenatal admission during six months study period was 6183. Out of them 231 patients were eclamptic. The frequency of eclampsia was 3.73%. Mean age of the patients was 24.38 ± 5.19 years. Majority of the patients 118(51.08%) were in age group of 21-30 and 96(41.55%) patients were teenagers. There were 11(4.76%) patients between 31-40 years age group. Only 6(2.59%) were more than 40 years of age.

Majority of the patients 117(50.61%) were uneducated while 62(26.83%) were having their education up to primary. Education up to middle was in 29(12.55%) patients. There were 17(7.35%) patients with education up to matric and only 6(2.59%) patients were having higher education.

Regarding socioeconomic status, 157(67.96%) patients belonged to low socioeconomic status. There were 66(28.57%) patients with middle socioeconomic status and only 8(3.46%) were belonging to high socioeconomic status. Majority of the patients

168(72.72%) were unbooked and only 63(27.27%) were booked cases.

Analysis of the gravidity and parity distribution showed that majority of the patients 157 (67.96%) were nulliparous (Gravida 1 and Para 0), while 28(12.12%) were gravida 2 and para 1, 36(15.58%) were gravida 3 and para 2. Only 10(4.32%) patients were gravida 4 or more.

Gestational age at the time of diagnosis was noted. Most of the patients 132(57.14%) diagnosed at gestational age less than 37 weeks and 99(42.85%) were diagnosed at term i.e between 37-42 weeks.

Abdominal delivery was the mode of delivery i.e in 120(51.94%) of cases. 89(38.52%) patients had spontaneous vaginal delivery and 22(9.52%) patients had instrumental vaginal delivery.

Prematurity was the most frequent complication observed i.e in 131(56.70%) cases and 147(63.63%) neonates required admission to NICU due to various reasons. Low birth weight was observed in 117 (50.14%) cases. There were 13(5.63%) intra uterine deaths, 29(12.55%) stillbirths and 21(9.09%) early neonatal deaths.

Table-I. Age wise distribution of cases (n=231)

Age group (in years)	No. of cases	%age
<20	96	41.55
21-30	118	51.08
31-40	11	4.76
>40	06	2.59

Table-II. Parity wise distribution of cases (n=231)

Parity	No. of cases	%age
G1P0	157	67.96
G2P1	28	12.12
G3P2	36	15.58
G4 or more	10	4.32

Table-III. Gestational age at the time of diagnosis

Gestational age at delivery	No. of cases	%age
<37 weeks	132	57.14
37-42 weeks	99	42.85
>42 weeks	-	-

Table-IV. Mode of delivery (n=231)

Type of delivery	No. of cases	%age
Spontaneous vaginal delivery	89	38.52
Instrumental vaginal delivery	22	9.52
Abdominal delivery	120	51.94

Table-V. Perinatal Outcome

Complication	No. of patients	%age
Antepartum		
Premature	131	56.70
Intrauterine death	13	5.62
Intrapartum		
Still birth	29	12.55
Postpartum		
Low birth weight	117	50.64
Admission to NICU	147	63.63
Early neonatal death	21	9.09

DISCUSSION

Eclampsia is a significant cause of maternal and perinatal mortality, particularly in developing countries where the incidence is still high. Worldwide it accounts for 50000 maternal deaths annually¹². It is also a major cause of stillbirth and neonatal death. Intrauterine growth retardation (IUGR), low birth weight, prematurity and neonatal asphyxia are the other consequences¹².

During this study period total number of obstetric admission were 6183. Out of these, 231 patients presented with eclampsia making a frequency of 3.73%. Incidence in developed countries is 1 in 2000(0.05%) to 10 in 2000 deliveries^{13,14}. In developing countries eclampsia is even more prevalent. Majority of patients in our study were in age group 21-30 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%¹⁰.

Poor socioeconomic status is a predisposing factor of eclampsia. The same was noted in the present study, 157(67.96%) belonged to low income group and were also illiterate. Lack of antenatal care has been documented by several studies as a risk factor for eclampsia. This finding is consistent with another study in which most of the patients came from rural area (75%) and illiterate (48%) and from a poor socioeconomic condition¹⁵. In our study most of women never received antenatal care and were and unbooked i.e 72.27% but on the other, Douglas and Redman reported that eclampsia was seen despite antenatal care and within 1 week of woman's last visit to her doctor¹⁶. Majority of the patients 157 (67.9%) in present study were primigravida. Previous studies also showed higher prevalence of primigravida i.e 58%¹⁷. In our study, most of the patients presented at gestation less than 37 weeks i.e 132(57.14%) patients and 99(42.85%) were diagnosed at term. Relatively more cases occurred before 37 completed weeks in the study from UK (44%)¹⁶.

Out of the total 231 patients, caesarian section was the mode of delivery in 120(51.94%) patients, 22(9.52%) had instrumental delivery and 87(37.66%) had spontaneous vaginal deliveries. Our results are supported by an international study in which the main mode of delivery was emergency caesarian section in 55.7%, spontaneous vertex delivery was 34.1%, assisted vaginal breech delivery 6.8% and instrumental vaginal delivery was 3.4%¹⁸. But our results disagree with a local study in which commonest mode of delivery was spontaneous vaginal delivery 56.4% followed by caesarian section i.e 38.2%¹⁹. Prematurity was the most common finding observed in the present study(56.70%). A prospective study from Nigeria reported that prematurity was the commonest cause of neonatal deaths¹⁸. In support of this statement, a local study also noted that prematurity was the leading cause of neonatal deaths in 70%, low birth weight was in 50.64% babies. In an international study LBW babies significantly faced worse than their full sized counterparts¹⁸.

Rate of admission to NICU due to various reasons was 63.63% in the present study. This is in consonance with a recent study in which 54(61.4%) babies were admitted in special care baby unit. Indication for admission includes prematurity, low birth weight, severe birth asphyxia, neonatal jaundice and neonatal sepsis. Intrauterine death was in 5.6% of cases in our study. In a study conducted in Nepal, 43 babies were born to 41 mothers and there were 7 intrauterine deaths²⁰. Stillbirth was observed in 12.55% of cases. This rate is higher than observed in a previous study in which 9% was stillbirth¹⁰. Early neonatal death was observed in 9.19% of cases in our study. It is similar to the results of local study conducted by Nahar S¹⁰.

CONCLUSIONS

Eclampsia is still a major threat to the pregnant ladies in our institution and a major cause of perinatal morbidity and mortality. It is mostly preventable by early diagnosis and management of pre eclampsia and hypertensive disease. As stillbirth, prematurity and birth asphyxia are the most important causes of perinatal loss, so in eclampsia early referral of patients, better obstetric management, early resuscitative measures and good neonatal care facilities can improve the perinatal outcome.

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Correspondence Address:

Dr. Saima Ashraf,
Senior Registrar, Gynae Unit 1,
Nishtar Hospital Multan.
shahzadalam1777@hotmail.com

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PREVIOUS RELATED STUDIES

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“It is better to be feared than loved,
if you cannot be both.”

Niccolo Machiavelli (1469-1527)