Complications and Outcome of Patients of Pre-eclampsia and Eclampsia Presenting to Medical Wards of Mayo Hospital Lahore

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Aims and Objectives: To find out the complications and outcome of patients of pre-eclampsia and eclampsia presenting to medical wards of mayo hospital Lahore.

Material and Methods: This study was carried out from June 2007 to June 2008 on patients presenting to medical wards of Mayo Hospital Lahore with history of pre-eclampsia and eclampsia.

Study Design: It is a retrospective type of study.

Results: Out of 100 patients presenting to medical wards, 60 were primigravida and 40 multigravida. The age of the patients was between 18 – 40 years. 35 patients reported after delivery out of which 20 had spontaneous vaginal delivery and 15 had C-section, remaining 65 were pregnant at presentation. Out of 100 patients 33 developed CNS complications in which 26 developed seizures, 3 developed cerebral hemorrhage, 1 developed cerebral infarction, 2 reported with severe headache and 1 developed blurred vision. 30 patients developed acute renal failure. 25 patients had HELLP syndrome, 6 had disseminated intravascular coagulation, 4 had abruptio placentae and 2 developed ARDS. Out of 100 patients 47 patients were discharged, 24 patients died and 29 patients left against medical advice.

Conclusion: Pre-eclampsia and eclampsia are associated with increase in maternal and perinatal morbidity and mortality. The importance lies in the diagnosis direct input by the clinician and special expertise in management so that maternal and perinatal morbidity can be brought down with early reference to tertiary care level hospitals.

Key Words: Pre-eclampsia, Eclampsia, Hypertension, Seizure, HELLP syndrome.

Introduction

Hypertensive disorders of pregnancy are responsible for significant maternal and perinatal morbidity and are second leading cause after embolism of maternal mortality.[10] Hypertensive disorders of pregnancy complicate approximately 12% - 22% of all pregnancies.[2] Gestational hypertension, which includes pre-eclampsia and eclampsia is responsible for 70% of cases, whereas chronic hypertension for 30% of hypertensive disorders of pregnancy. Pe-eclampsia is defined as the development of hypertension, proteinurea or both after 20 weeks of gestation in a women with previously normal blood pressure, whereas eclampsia is defined as a new onset grand mal seizure in a woman whose condition also meets the criteria for pre-eclampsia when a coincidental neurological disease such as epilepsy does not cause convulsion.

Pre-eclampsia and eclampsia is a cause of high morbidity and mortality for both mother and fetus especially in developing countries.[3] Without intervention pre-eclampsia progresses to eclampsia requiring emergency casearian section of the mother.[4] The risk of developing pre-eclampsia and eclampsia appears to be greater in women who have family history of hypertension and there may also be a relationship between risk of pre-eclampsia and metabolic syndrome.[5]

Pre-eclampsia and eclampsia results in multiorgan failure[6] and thus causes seizures, stroke, adult respiratory distress syndrome renal failure, pulmonary odema, disseminated intravascular coagulation and HELLP syndrome. While the risk for fetus includes intra uterine growth retardation prematurity and death. HELLP syndrome complicates severe pre-eclampsia and eclampsia due to activation of Von Willibrand factor leading to thrombocytopenia and thrombotic angiopathy.[7]

According to one study prevalence of pre-eclampsia and eclampsia is around 19%[8] in Pakistan while studies from USA reported its prevalence about 1% - 24%. The Purpose of this study was to report the outcome and complications of normal physiological phenomenon i.e. pregnancy which can simply be monitored by measuring blood pressure and by looking for urinary albumin after 20 weeks of pregnancy so that we can reduce the mortality and morbidity of both mother and fetus by educating them and by providing them effective antenatal and intrapartum care.

Material and Methods

This study was carried from June 2007 – June 2008 on patients of pre-eclampsia and eclampsia presenting to medical wards of Mayo Hospital Lahore.

Inclusion Criteria

Patients who fulfilled the following criteria were included in the study.

1. All patients who were pregnant and developed hypertension at or after 20 weeks of gestation.
2. All patients who developed hypertension within 6 weeks of delivery.
3. Patients who developed ankle odema at 20 weeks of pregnancy or within 6 weeks of delivery.
4. History of fits after 20 weeks of gestation or within 6 weeks of delivery.
5. Urine complete examination reveals proteinuria.

Exclusion Criteria

Following patients were excluded from the st**u**dy.

1. All patients having history of essential hypertension.
2. All patients who were having pregnancy induced hypertension but not fulfilling the above criteria.
3. History of epilepsy.

RESULTS

Table 1: *Complications of Pre-eclampsia and eclampsia.*

CNS 33%	26%	Seizures
	3%	Cerebral haemorrhage
	1%	Cerebral infarction
	2%	Severe headache
	1%	Blurred vision

ARF	30%
HELLP	25%
DIC	6%
Abruptio Placentea	4%
ARDS	2%

Table 2: *Outcome of patients.*

Discharge	47
Expired	24
Left against medical advice	29

Discussion

Eclampsia is a commonest cause of convulsions in pregnancy, next being epilepsy. It is very common in developing countries.[9] The major cause being social deprivation and lack of access to trained birth attendants. Another reason for this high incidence is that mostly uncomplicated labour cases never reach hospital, they either deliver at home or primary health care centers and only complicated cases reach tertiary care centers occurring to poor socioeconomic status of patients and lack of education.[10]

Young age less than 20 years is a risk factor for eclampsia but in our study the mean age was 28 years which is in accordance to the study of Doughlas and 9Redman which showed that this disorder was not seen in teenage but more frequently in their twenties.[11]

Another risk factor for eclampsia is being primigravida as shown by Shennan A, and is also seen in our study. Out of 100 patients 60 were primigravida and 40 multigravida.[12]

HELLP syndrome complicates pre-eclampsia in 4-12% of cases as seen in a study by Rehman and Wendon[13] but in our study its incidence was around 25%, which is perhaps due to increase incidence of eclampsia and its complications seen in our part of world.

The maternal mortality due to eclampsia is around 10-15% where as in our study it was 24%. Maternal mortality increases with age of the mother as shown by Shamshad Begum and Aziz-un-Nisa.[14] Other risk factors for maternal mortality and morbidity are late referral to tertiary hospital, delay in hospital management, lack of transport, un-booked status of patients, nulliparity and prolonged state of unconsciousness and multiple seizures prior to admission.

The reported data in Pakistan showed incidence of mortality 18-23% and morbidity 13-26% rated to obstetrical acute renal failure[15] where as in our study 3 patients out of 47 patients expired were suffering from acute renal failure while morbidity due to it came out to be 30%.

Conclusion

The findings reported in our study showed that there is high morbidity and mortality due to pre-eclampsia and eclampsia which can simply be overcome by educating our women to get themselves booked for the antenatal care at the start of their pregnancy so that their blood pressure can be monitored through out pregnancy and urine can be checked for albumin so that proper treatment should be started prior to the development of deadly complications of pre-eclampsia and eclampsia. To reduce the complications during pregnancy it is essential to strengthen the infrastructure and provision of antenatal and intrapartum health care in community by trained health care personnels, and also by educating our women about the severity of this problem by giving them advice on nutrition during pregnancy i.e. salt restriction and also giving them advice on family planning to reduce the incidence of pre-eclampsia and eclampsia in forth coming pregnancies.

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