

A Study of Maternal Deaths from Pre Eclampsia and Eclampsia in a Tertiary Care Centre

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Abstract:

Background: Pre eclampsia and eclampsia is one of the leading cause of maternal morbidity and mortality worldwide. Eclampsia though still remains an obstetric enigma and is a major problem in developing countries. Predicting the onset of these complications could aid in timely intervention such as increased surveillance, treatment of symptoms, transfer to higher care facility and delivery when necessary which could reduce morbidity and mortality from the hypertensive disorders of pregnancy.

AIM: The aim of this study is to calculate the total number of women admitted with hypertensive disorders of pregnancy and eclampsia in the labour room and their case fatality rate and to calculate the number of mothers who died from pre eclampsia and eclampsia and to analyse all the maternal deaths due to hypertensive disorders of pregnancy in order to identify the root causes of substandard care leading to maternal deaths.

MATERIALS AND METHODS: This study was carried out at GMKMCH ,Salem for a period of 2 years from January 2016- December 2017. All the mothers who died from severe pre eclampsia and eclampsia were included in this study and they were all analysed.

RESULT: In 2 years study period, there were 1551 women admitted with hypertensive disorders of pregnancy and 341 women admitted with eclampsia giving a prevalence rate of 9.28% and 2.04% respectively. Case fatality rate of Hypertensive disorders of pregnancy was 1.61 %. During the study period , there were total 84 maternal Deaths. Out of 84 maternal deaths , 25 were due to severe pre eclampsia and eclampsia making it the leading cause of maternal mortality in our institute.

CONCLUSION: Pre eclampsia and eclampsia is one of the leading causes of maternal mortality and morbidity. Though the incidence of pre eclampsia and eclampsia is on the decline, still it remains the main contributor to poor maternal and fetal outcome, Regular antenatal checkups, early diagnosis, use of anti-hypertensive drugs, optimal timing of delivery and strict fluid balance, anti -convulsants in case of eclampsia will help to achieve successful outcome.

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I. Introduction

Hypertensive disorders complicating pregnancy are common and pre eclampsia and eclampsia being the major cause of maternal morbidity and mortality [1]. Worldwide 10% of all pregnancies are complicated by hypertension. Approximately 1 in 2000 deliveries is complicated by eclampsia in developed countries whereas the incidence in developing countries is estimated around 1 in 100 to 1 in 1700 cases [3-4]. In one study, the prevalence of pre eclampsia was 5.6% and that of eclampsia was 0.6% in India.[5]. However, the impact of the disease is felt more severely in developing countries, where the risk that a woman in a developing country will die of pre eclampsia or eclampsia is about 300 times that of a woman in a developed country[6].

Approximately, 72000 pregnant women die every year because of eclampsia and severe pre eclampsia that amounts to nearly 200 women every day. Since pregnant women in developing countries are amongst the most vulnerable population in the world, community health care workers should be trained properly to provide timely care to women with hypertensive disorders of pregnancy. Prevention Strategies should be applied to every Pregnant women since we cannot predict who will develop pre eclampsia given the limitation in resources[7-8].

Measuring blood pressure and testing urine for proteinuria should be made available to every pregnant women and should be referred to higher centre where such women can be managed properly. Predicting the onset of maternal complications such as eclampsia, stroke ,damage to kidneys and lungs could aid in timely intervention such as increased surveillance, treatment of symptoms, transfer to higher care facility and delivery

when necessary which could reduce mortality and morbidity from hypertensive disorders of pregnancy[9]. The aim of this study is to sensitise health care providers regarding the importance of early diagnosis and early referral and timely management to save these women from preventable deaths with good standard of care.

Hypertensive disorders in pregnancy may be classified as following:

1. Gestational Hypertension(formerly pregnancy induced hypertension that included transient hypertension).
2. Preeclampsia
3. Eclampsia
4. Preeclampsia/Eclampsia superimposed on Chronic Hypertension
5. Chronic Hypertension

Report of the maternal mortality committee FOGSI and other studies shows the incidence of preeclampsia in India ranges between 11-13%. The effect of gestational hypertension may range from simple hypertension to multi-organ failure[10]. If local protocols and guidelines are prepared and followed using recommendations by International Society for the study of Hypertension in Pregnancy (ISSHP), maternal and perinatal mortality and morbidity can be reduced[11].

II. Materials And Methods

This study was carried out in the department of Obstetrics and Gynaecology,GMKMCH, Salem during the period from January 2016- December 2017. GMKMCH is a tertiary care centre in Salem, Tamil Nadu where pregnant women are referred from surrounding areas including tribal areas. There were around 40 admissions per day to the labour room out of which 15-20 cases on an average are referrals. All the women admitted during pregnancy or within 42 days of termination of pregnancy or delivery who died of eclampsia and preeclampsia and their complications were included in this study. Pregnant women who died of AFLP, were not included.

During the study period there were 84 maternal deaths among which preeclampsia and eclampsia deaths were 25. All the death case sheets were critically analysed. Information regarding age, parity, socioeconomic status, literacy, booking status, referral, time of occurrence of death, cause of death were analysed.

III. Results And Discussion

During the study period of 2 years from January 2016 – December 2017, there were 1551 women with hypertensive disorders of pregnancy and 341 women with eclampsia giving a prevalence rate of 9.28% and 2.04 % respectively. There were 25 maternal deaths from Hypertensive disorders of pregnancy contributing to 29.76% of total deaths in our institute in the 2 years study period. Preeclampsia and eclampsia being the major cause of maternal death in our institute followed by deaths due to obstetric haemorrhage and sepsis. Case fatality rate in women admitted with Hypertensive disorders of pregnancy in our labour room during the study period was 1.67%.

Table 1 : Age wise distribution

Age	Number of cases	Percentage
<30	19	76
>30	6	24

Table2 : Parity

Parity	Number of cases	Percentage
Primi	13	52
Multi	12	48

Table3: Socioeconomic Status

Socioeconomic status	Number of cases	Percentage
Low	23	92
High	2	8

Table 4: Literacy

Literacy	Number of cases	Percentage
Literate	6	24
Illiterate	19	76

Table 5: Number of Referrals

Number of referrals	Number of cases	percentage
Referrals	18	72
internal	7	28

Table 6: Location

Location	Number of cases	percentage
Rural	14	56
urban	6	24
tribal	5	20

Table 7: Time period of death

Time period of death	Number of cases	percentage
Antenatal period	3	12
Within 24 hrs from delivery	9	36
Postnatal 1- 42 days after delivery	13	52

Table 8: Cause of Death

Cause of Death	Number of cases	percentage
Pulmonary Edema	8	32
Intracranial Haemorrhage	7	28
Multi organ failure	6	24
DIC	4	16

In the present study, pre eclampsia and eclampsia contributed to 29.75% of maternal deaths, foremost cause of maternal death in our institute followed by obstetric haemorrhage and sepsis . 76% of Deaths occurred in women who were less than 30 years and 24% occurred in women who were more than 30 years. Majority of cases of hypertensive disorders of pregnancy were referred from rural and tribal areas. Most of the women who died due to pre eclampsia and eclampsia ere from low socioeconomics status. Early onset preeclampsia is overall a more aggressive condition than late onset disease, but fulminant , ultimately fatal pre eclampsia also can occur at term [12].

Fourteen women had eclamptic fits, 12 in the antenatal period and 2 in the postnatal period. HELLP syndrome is characterised by Haemolysis , Elevated Liver enzymes and low platelet count. There were evidence of HELLP Syndrome in 8 women and 9 women had Abruption. 8 women died from pulmonary edema, of the other causes 6 died due to multi – organ dysfunction in ICU. 4 died due to DIC due to abruption, 7 had intracranial haemorrhage.

Even today , large number of maternal deaths are due to clinical triad of eclampsia ,haemorrhage and Sepsis. Despite the availability of magnesium sulphate for prophylaxis and treatment of maternal seizures, the rate of seizures and maternal complications remain high. In many cases, patients were referred very late in critical condition.

IV. Conclusion

Hypertensive disorders complicating pregnancy are common and preeclampsia and eclampsia being the major cause of maternal morbidity and mortality. All pregnant women should have her blood pressure and urine albumin to be checked at each antenatal visit and also after delivery. Though the incidence of pre eclampsia and eclampsia is on the decline, still it remains the major contributor to poor maternal and fetal outcome. Early transfer of high risk patient to higher centre is important and the higher centres should be well equipped to treat such critically ill patients.

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