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Research Article

**IN PREGNANCY EFFECTS OF HYPERTENTION ON  
PERINATAL AND MATERNAL OUTCOME IN TEACHING  
HOSPITALS**<sup>1</sup>Dr. Nargis Bashir, <sup>2</sup>Dr. Zahra Batool, <sup>3</sup>Dr. Muhammad Suleman<sup>1</sup>EMO, Lahore General Hospital<sup>2</sup>WMO THQ Hospital Kharian, Gujrat<sup>3</sup>Hospital: RHC Dina Jhelum**Abstract:**

**Purpose:** To investigate the hypertensive disorders frequency in pregnant lady to determine the perinatal and maternal outcomes.

**Study plan:** It is a retrospective descriptive study.

**Place and Duration:** The study was performed in the Gynecology and Obstetrics Unit I department of Services Hospital, Lahore for the period of one Year from February 2016 to February 2017.

**PATIENTS AND METHODS:** 550 total cases were selected for parity, age, diagnosis, and gestational age, type of delivery and prenatal period and intrapartum complications. The data using SPSS get analyzed software (version 15).

**Results:** During the study, there were 550 cases of hypertensive disorders with a frequency of 11.718 and 5.34% of births. severe preeclampsia was observed in 21 (3.3%) patients, 41 (6%) in postpartum eclampsia, 121 (19.2%), 85 (13%) and 232 (49%) chronic tension eclampsia. There were thirty nine mortality of mothers (case mortality: 6.23%). The mean age for severe preeclampsia, eclampsia, preeclampsia and chronic tension was 28, 27, 24 and 29 (27 years old). The most common maternal complications of hypertension in 24 women was postpartum hemorrhage with 4.2% which was complicated with pulmonary edema in 8 women (1.4) and abruptio placenta in 9 women (1.6%). In the study group, preeclampsia, severe preeclampsia and eclampsia prematurity were 14%, 5% and 8.6%, respectively. 46%, 51%, and 61% of patients required indecisive, preeclampsia, eclampsia and preeclampsia respectively. Main fetal complications were birth (preeclampsia 14%, severe preeclampsia and eclampsia, 15% 18%) and low birth weight (preeclampsia 31%, severe preeclampsia and eclampsia 52% 49%). Conclusion: Hypertension in pregnancy is a cause of mortality and maternal and perinatal morbidity.

**Keywords:** Pre-eclampsia, MMR, Eclampsia.

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**INTRODUCTION:**

Hypertensive crisis in pregnant women are occurred in 6% of total reported pregnancies. It is common cause of maternal mortality worldwide. In Pakistan researches this is 3rd most important and common cause of maternal mortality. In Pakistan a study reveals that the incidence of hypertensive disorder in pregnant women was reported as 15%. Hypertension also affects the fetus during pregnancy. Premature birth is associated with low birth weight and increases neonatal intensive care unit admission risk. In a hospital in Lahore, he discovered that lifelong birth was the main reason. In the developing world, hypertension during pregnancy is fatal compared to the developed world.

In pregnancy the causes of hypertensive disorders is still uncertain. These include many risk factors such as maternal age, obesity, increased interval between pregnancies, maternal hypertension family history, twin pregnancy, diabetes mellitus, bacterial and viral infections and vascular disorders such as antiphospholipid syndrome. Perinatal and Maternal morbidity also increases in hypertensive crisis in pregnancy. complications associated with mother include postpartum hemorrhage, placental abruption, pulmonary edema and intracranial hemorrhage. Perinatal morbidity is mostly associated with intrauterine growth restriction, prematurity and low birth weight. In subsequent pregnancies recurrence of the disease requires prophylaxis. Low dose aspirin role in the next pregnancy is well known in patient of eclampsia. Noninvasive methods are the use of first and second quarter Doppler uterine arteries in predicting early preeclampsia.

We have done this research to know the various hypertensive disorders frequency in pregnancy and perinatal and maternal outcomes as hypertensive disorders are among the leading three causes of maternal death in Pakistan.

**PATIENTS AND METHODS:**

A cross-sectional retrospective study was conducted by reviewing all women medical records with hypertensive crisis of pregnancy at the Department of Obstetrics and Gynecology 1, Hospital Services, Lahore Hospital for a period of one year from February 2016. Until February 2017. 550 pregnant women with hypertensive disorder were detected. There was a full medical record for 500 women entering and analyzing the SPSS software program.

Hypertensive diseases of the pregnancy are classified as preeclampsia (PE), severe preeclampsia (EPE), eclampsia and chronic tension. Preeclampsia is

defined 20 weeks after the beginning of the newborn with blood pressure 140/90 mm hg. In conjunction with proteinuria in pregnancy ( $> 300$  mg / dl at 24 hours). In severe preeclampsia, severe headache, blurred vision, epigastric pain and oliguria are defined as  $2$  g / dL  $160/110$  mmHg = proteinuria blood pressure.

Without the cause of eclampsia, PES is defined as generalized seizures in a woman. Women who were already hypertensive before pregnancy were grouped with chronic hypertension. After the attack we added the women who were taken to the unit after birth. Care must be taken to discard other causes of attack such as malaria, hypocalcemia and hypoglycemia. For this reason, there were five groups in total: preeclampsia, eclampsia, severe preeclampsia, postpartum eclampsia and chronic hypertension. Most of these women were not enrolled in the hospital. The department protocol involves the routine use of magnesium sulfate for women with eczema attacks that continue 24 hours after the last attack. For acute control of blood pressure oral nifedipine and, hydralazine are used. Blood samples are taken to obtain a complete picture of blood and blood sugar randomization of liver and kidney function tests. It is routinely prepared for urine, albumin and 24-hour protein in urine. The clotting profile is performed in the case of low platelet count. Complications in mother such as HELLP syndrome (hemolysis, low platelets, liver enzymes), renal failure, placenta, neurological complications, postpartum haemorrhage and pulmonary edema have been observed.

Fetal outcome can be birth weight, gestational age, intrauterine death, Apgar score or early neonatal death. Demographic data are found in previous pregnancies and recurrent diseases, including age, parity and hypertension.

**STATISTICAL ANALYSIS:**

Data were analyzed using SPSS (Version 14.0). Mean values of hemoglobin, gestational age, platelet (thrombocyte), total leukocyte (TLC), maternal age, serum creatinine and five fetal weight groups were compared with one-way ANOVA. Turkey obtained by HSD post hoc test, ANOVA significant value was used for multiple comparisons. The risk of complications of the hypertensive mother was also calculated.

**RESULTS:**

A total of 8500 deliveries were performed during the study and 550 women were admitted to the hospital with 5.34% of hypertensive disorders. 232 women

with preeclampsia, 85 with PES, 122 with eclampsia, 20 with postpartum eclampsia and 41 with CH. Thirty-nine maternal deaths (case fatality rate: 6.23%). Table 1 shows the demographic and clinical

data of these women divided into five groups. Maternal age was higher in women with chronic hypertension and lower in women with eclampsia

Table 1 showing demographic and clinical variables of women with hypertensive disorder of pregnancy

	Pre eclampsia N= 308 X ±SD [significance]	Severe Preeclampsia N =85 X ±SD [significance]	Eclampsia N = 122 X ±SD [significance]	Postpartum eclampsia N = 20 X ±SD [significance]	Chronic hypertension N=41 X ±SD [significance]	P value
Haemoglobin	9.32±1.56 [A]	9.74±1.80 [A]	9.43 ±2.07 [A]	9.79 ±1.68 [A]	9.63± 1.60 [A]	0.251
TLC	8894±7226 [A]	8840±4245 [A]	11926±9821 [B]	10794±4807 [A]	9269±5062 [A]	0.004
PLT	282±1525 [A]	574±3118 [A]	189±97.41 [A]	194±106 [A]	204±113 [A]	0.681
Serum Urea	21.80±10.57 [A]	25.34±17.57 [AB]	24.01±12.85 [BC]	30.39±16.27 [C]	35.85±5.44 [BC]	<0.0001
Serum Creatinine	.769 ± .483 [A]	.787±.493 [AB]	1.016±.737 [B]	1.200±1.691 [B]	1.021±.937 [AB]	0.001
Maternal age	27±5.37 [A]	28±5.07 [A]	24±5.05 [B]	26±7.29 [AB]	29±6.34 [A]	<0.0001
Gestational age	36±2.84 [A]	35±2.60 [AB]	34±3.67 [CD]	36±2.012 [AD]	34±3.66 [BD]	<0.0001
Fetal weight in grams	2774±837 [A]	2476±957 [B]	2345±852 [B]	2790±242 [AB]	2634±900 [AB]	<0.0001

\* Different alphabets indicate statistical significance

In women levels of urea in serum was higher with chronic hypertension. In eclampsia Women also had higher white blood cell counts, because the platelet count was not related to the severity of the disease. women with eclampsia has chronic hypertension and low Gestational age, fetal weight at birth p value <0.001.

46%, 51% and 61% of the patients requested cesarean for PE, SPE and eclampsia..

Commonest complication was postpartum hemorrhage in 24 women (4.2%), pulmonary edema in 8 women (1.4%). placental abruption in 9 women (1.6%) . 39% of women with eclampsia had more than three attacks before they entered the hospital. women with eclampsia concur intracranial bleed, more pronounced in women who had > 3 attacks prior to admission. Main fetal complication is silent birth was the in all groups. SPE: 18%, PE: 14%, eclampsia: 15%. 110 perinatal deaths, giving a perinatal mortality rate of 175 per 1000 births. women with eclampsia give birth to Low birth weight babies <2.5 kg also a significant finding in (52%).

## DISCUSSION:

Disorders of Hypertensive crisis occur in pregnant women in 6-8%. This rate has variations among various populations. Of all the pregnancies Preeclampsia occurs in 3-14%. The incidence of eclampsia in a hospital study in Pakistan was 3.2%.

The incidence of complicated hypertensive chronic diseases is 3% in pregnancy. In this study, the prevalence of hypertensive crisis was around 5.34% during pregnancy. The variation in incidence of the disease in various populations is attributed to ethnicity, race, parity, geographical location and many other factors.

In young nulliparous women, preeclampsia and severe eclampsia are frequent, with little or no access to the prenatal centers of low socioeconomic classes. Infection was associated with increased risk of PE. Bacterial and viral infections have been shown to increase PE risk in both folds. In this study, we did not find a significant relationship with the severity of the platelet counts. Hypertension has been attributed to pregnancy throughout the year. A national study examining the direct causes of maternal deaths

identified third cause of maternal deaths before eclampsia, hemorrhage, and sepsis. Hypertensive disorders accounted for 15% of mother deaths, the second most common cause of maternal deaths, at 3 years in our own hospital. Intracranial hemorrhage is the leading cause of death in hypertensive disease of pregnancy

In our study there were 39 maternal deaths with the majority of women with eclampsia. To reduce the incidence of eclampsia-related maternal deaths, tight control of blood pressure with magnesium sulphate has been proposed. The frequency of eclampsia in the previous study was 21%. The prevalence of postpartum eclampsia in our study was 3.6%. The prevalence of eclampsia in the prenatal period is 38-55%, while in the intrapartum period it is 13-36%. Postpartum seizures can be seen within 48 hours, but between 5 and 17% at 6 weeks. The prevalence of eclampsia in developing countries is higher than in developed countries (4-6 cases / 10,000 live births for 6-100 cases). complications in Perinatal period hypertensive diseases in pregnant women is low birth weight at birth, premature birth, oligohydramnios, intrauterine death due to asphyxia, and low score of Apgar. The stillbirth frequency in our study according to cumulative was 175/1000 live births. Stillbirths were higher in women with SPE (18%). Similarly, hypertension in pregnancy was defined as the main cause of fetal death in the control of fetal death in a hospital in a large tertiary referral center. The increase in perinatal mortality rate is also due to premature pregnancy. In our study, the average gestational age at 34 weeks was higher significantly in eclampsia women than in the other subgroups.

The rate of obstetric intervention was high in hypertensive disorders in pregnancy. The highest rate of eclampsia (52%), the main form of cesarean birth, was observed in our study. The indications for surgery mainly include were fetal distress and uncontrolled blood pressure. Recently, cardiovascular risk has been emphasized in women with hypertensive pregnancies in the literature. Complications (hypertension) were found to be higher in both maternal complications. and proteinuria as a fetus (intrauterine growth restriction) .21 When the hospital is being discharged, the importance of changing the lifestyles of these women and the importance of medical follow-up in the last years of life should be emphasized.

### CONCLUSION:

Without this study, we came to the conclusion that hypertensive pregnancy disorders for maternal and

perinatal morbidity and mortality are an important reason in our institution.

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