



A cross sectional study on the relation between PIH and their pregnancy outcomes.

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ABSTRACT Hypertensive disorders in pregnancy, especially preeclampsia, remains as a major cause of maternal and infant morbidity and mortality worldwide. A prevailing hypothesis regarding the pathogenesis of preeclampsia is the “ischemic model”, which means decreased uteroplacental perfusion is one of the main cause. Preeclampsia is one of the commonest medical disorders during pregnancy and affects approximately 5–10% of all pregnancies mostly affecting the primigravida. The present study was conducted in the Department of Physiology, Tezpur Medical College and hospital. It was carried out among 81 previously normotensive pregnant women, aged 18-35 years, over a period of 6 months, visiting casualty for delivery and admitted indoor. The study was. After delivery the fetal birth weight (FBW) were recorded accordingly. After statistical analysis it was found that the prevalence of PIH was 74.07% and the prevalence of Low birth weight (LBW) babies was 62.96%. Both systolic and diastolic blood pressure were negatively correlated with FBW and this correlation was statistically significant. **SUMMARY:** This study indicates that PIH is significantly related to the birth of low birth weight babies.

KEYWORDS : Preeclampsia, PIH, Low birth weight, Systolic, Diastolic.

Introduction:

Hypertensive disorders in pregnancy, especially preeclampsia, remains as a major cause of maternal and infant morbidity and mortality worldwide (1). Despite numerous basic clinical and epidemiologic studies that have been conducted over the past half-century, knowledge of the etiology and pathogenesis of preeclampsia remains elusive (2).

A prevailing hypothesis regarding the pathogenesis of preeclampsia is the “ischemic model.” Decreased uteroplacental perfusion is hypothesized to be the primary step and the point of convergence of diverse pathogenic processes in the development of preeclampsia (4-6).

Birth weight is determined by both duration of gestation and rate of fetal growth. Preeclampsia significantly increases the risk of iatrogenic preterm birth (delivery) for maternal indications (7).

Preeclampsia is one of the commonest medical disorders during pregnancy and affects approximately 5–10% of all pregnancies mostly affecting the primigravida. It continues to be major causes of maternal and perinatal morbidity and mortality. So the study was carried out to find out the relation between the level of blood pressure among the pregnant women and the fetal birth-weight at the time of delivery.

Materials & methods:

The present study was carried out among 81 previously normotensive pregnant women of the age group 18-35 years, over a period of 6 months, visiting casualty for delivery and admitted indoor. The study was conducted in the Department of Physiology, Tezpur Medical College and hospital. After delivery the FBW were recorded accordingly.

Women with previous history of hypertension, diabetes mellitus, history of recurrent miscarriages, previous hepatic or renal disease, multiple foetuses, idiopathic thrombocytopenic purpura (ITP) or any other bleeding diathesis, immunosuppressant or history of illicit drug use were excluded.

Pregnant women previously normotensive who presented with blood pressure $\geq 140/90$ mm of Hg, were considered to have PIH.

After taking informed written consent from each subject, detailed history was recorded regarding gravida, parity, history of diabetes mellitus, hypertension and other obstetrics and gynaecological complications.

Babies born with a fetal birth weight <2.5 kg were considered to be of low birth weight.

Statistical analysis:

Statistical analysis was done in Microsoft excel. Prevalence was documented in the form of percentage. Mean \pm SD of the data was calculated. p value and pearsons correlation coefficient were measured.

Results & observations:

Table 1: Table showing prevalence of PIH among pregnant women:

Parameter	Total no. of cases	No. of PIH cases	Prevalence of PIH
Blood pressure	81	60	74.07%

Prevalence of PIH was 60 out of 81 cases i.e, 74.07%.

Table 2: Table showing Mean \pm SD of SBP and DBP among pregnant women:

Parameter	Mean \pm SD of PIH(mmHg)
SBP	144.25 \pm 6.43
DBP	93.43 \pm 2.95

The Mean \pm SD of SBP was 144.25 \pm 6.43 and Mean \pm SD of DBP was 93.43 \pm 2.95

Table 4: Table showing Mean \pm SD of FBW:

Parameter	Mean \pm SD of FBW(kg)
FBW	2.31 \pm 0.30

The Mean \pm SD of FBW was 2.31 \pm 0.30

Figure 1: Mean \pm SD of SBP and DBP and FBW:

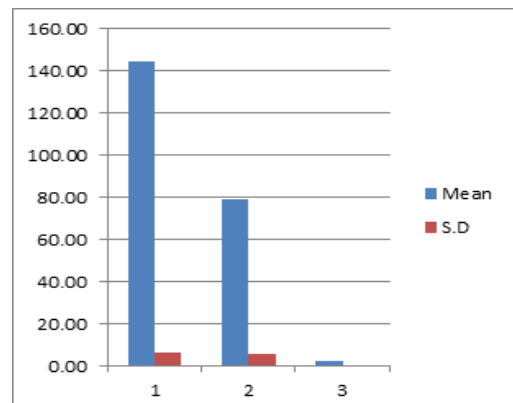


Table 3: Table showing prevalence of LBW among babies:

Parameter	Total no cases	No of LBW	Prevalence of LBW
FBW	81	51	62.96%

Prevalence of LBW was 51 out of 81 cases i.e. 62.96%

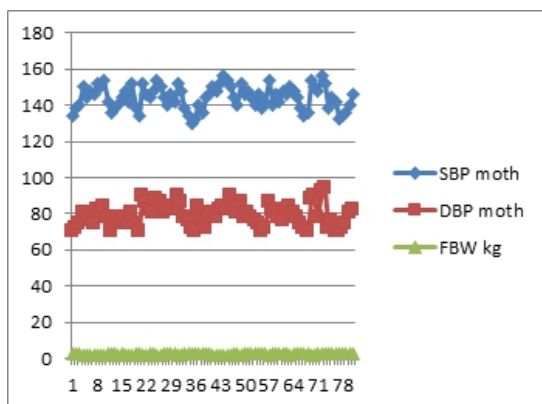
Table 5: Table showing Pearsons correlation coefficient and p value of SBP and DBP with FBW:

Parameter	Pearsons correlation coefficient	P value
SBP with FBW	-0.82289	< 0.0001
DBP with FBW	-0.70646	< 0.0001

Pearsons correlation coefficient of SBP with FBW was -0.82289 and p value was <0.0001.

Pearsons correlation coefficient of DBP with FBW was -0.70646 and p value was <0.0001.

Figure 2: Pearsons correlation coefficient of SBP and DBP with FBW:



Discussion:

The present study found that prevalence of pregnancy induced hypertension among previously normotensive pregnant women was 74.07% while the prevalence of low birth weight among the babies was 62.96%.

Mean±SD of systolic blood pressure and Mean±SD of diastolic blood pressure of pregnant ladies were 144.25±6.43 and 93.23±2.95 respectively while Mean±SD of fetal birth weight was 2.31±0.30.

Systolic blood pressure of mothers correlated negatively with fetal birth weight which was statistically highly significant. Pearsons correlation coefficient of systolic blood pressure with FBW was -0.82289 and p value was found to be <.0001. With increase in systolic blood pressure of mothers, fetal birth weight was found to decrease.

Diastolic blood pressure of mothers also correlated negatively with fetal birth weight which was statistically highly significant. Pearsons correlation coefficient of diastolic blood pressure with FBW was -0.70646 and p value was <.0001. With increase in diastolic blood pressure of mothers, fetal birth weight was found to decrease.

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