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A STUDY ON PREGNANCY INDUCED HYPERTENSION AND FOETAL OUTCOME AMONG PATIENT WITH PIH AT TERTIARY CARE HOSPITAL, VELLORE DISTRICT, TAMILNADU

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ABSTRACT

Hypertension is one of the common medical complictaions of pregnancy and contributes significantly to maternal and perinatal morbidity and mortality. Hypertension is a sing of an underlying pathology, which may be pre-existing or appears for the first time during pregnancy. Preeclampsia and eclampsia are the leading causes of maternal mortality and morbidity in India and worldwide. The etiology of preeclampsia remains obscure, the treatment is mostly empirical and symptomatic. There is no place of domiciliary treatment in an established case of pregnancy induced hypertension. All the preeclamptic and eclamptic patient were admitted in Tertitary care hospitals for continued evaluation and treatment of the patient. The evaluations were monitored and though this hospital data analyzed the interpertation of the foetal outcome of the patient. **Methods:** A cross-sectional study was conducted over period of 6 month in the department of Obstetrics and Gynecology, Tertiary care, Hospital at Vellore. A total of 44 pregnant women with PIH were enrolled in this study with inclusion-exclusion criteria. Necessary information such as Socio demographic information, detailed clinical and obstetric history, clinical examination, investigations and foetal outcome was note by using preformed performa. Data were entered and analyzed by computer assisted personal Interviewing (CAPI) and face document Review. **Results:** most of the hypertensive disorder mothers were under the age group of 22 - 27 years, (58.66%), prevalence of pregnancy induced hypertension was more among younger primigravidae mothers (60.72%). Among hypertensive disorder mothers had headache (40.42%) either located over the occipital and frontal regional, 20.86% mothers had disturbed sleep followed by acute pain in the epigatric region associated with vomiting. Eye symptoms (10.45%) there must be blurring scotomata, dimness of vision or complete blindness. 17.89% mothers had intrapartum convulsion etc. Pregnancy induced hypertension mothers delivered 53.12% dead foetus due to spasm of uteroplacental due to chronic placental insufficiency, 8.71% of the mother were delivered Intrauterine Growth Restriction babies, and 23.67% of babies were admitted in neonatal intensive care unit due to Asphyxia and prematurity. 2.28% of neonatal death related to aggravation of the pre-eclampsia features inspite of medical treatment. **Conclusions:** Pregnancy induced hypertension is a common medical disorder associated with pregnancy. We noted that PIH is more prevalent in younger age groups and nulliparous mothers. PIH lead to a various clinical manifestation some of this may use as early recognition of PIH. PIH also lead to increase adverse foetal outcome. Thus fetal morbidity and mortality can be reduced among PIH patients by early recognition and institutional management.

KEYWORDS

Pregnancy induce hypertension, Blood pressure and Foetal outcome.

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INTRODUCTION

In woman disorders like hypertension during pregnancy make complication rate of 10 percentages of all pregnant cases and include a spectrum of disorders like gestational hypertension eclampsia and

preeclampsia. Preeclampsia is a term which is related to pregnancy disorder which includes the symptoms such as marked increase in blood pressure and proteinuria, which symptoms are seen after 20 weeks of pregnancy. Globally preeclampsia ranks top most of both fetal and maternal morbidity and mortality. Increase in Blood pressure during pregnancy is most common medical complications of pregnancy and which leads significantly to maternal and perinatal morbidity and mortality.

Objectives of the study

1. To determine the prevalence of Pregnancy Induced Hypertension among hypertensive disorder in pregnancy patients.
2. To evaluate the foetal outcome among patients with hypertensive disorders in pregnancy patients.
3. To correlate the hypertensive disorders and foetal outcome.

METHODS

A cross-sectional study was carried out for period of 6 month in the Department of Obstetrics and Gynaecology at tertiary care hospital, Vellore. A total 64 pregnant women who presented to our Hospital with pregnancy induced hypertension during the study period from August 2019 to January -2020 were enrolled for the study with following inclusion and exclusion criteria.

Inclusion criteria Women with 28 weeks of gestation and those who willing to participate in this study. Exclusion criteria those pregnant mother having chronic hypertension and those who not willing to participate in this study.

Verbal informed consent of each pregnant woman was taken for participation in this study. Necessary information such as socio-demographic informations, detail clinical and obstetric history, clinical examination, investigations and foetal outcome was noted in preformed Performa. Data was entered in MS excel and analyzed by using Epi Info. Appropriate statistical test were applied. In present study Hypertension in pregnancy is defined as blood pressure ≥140/90mm Hg. When hypertension in pregnancy accompanied by proteinuria (urinary excretion of 300mg protein in a 24 hour specimen/1+/> using random urine dipstick evaluation) it is known as preeclampsia. The diagnosis of preeclampsia in absence of proteinuria highly suggestive when hypertension is accompanied by headache, blurring of vision, abdominal pain or certain laboratory abnormalities particularly low platelet count and elevated liver enzyme either alone or in combination. Eclampsia is defined as occurrence of new onset grand mal seizure in women with preeclampsia that cannot be attributed to other causes. In our study we classify pregnant women into mild and sever hypertensive disorders of pregnancy, according to clinical classification. PIH classified into mild PIH (140/90 to 159/109 mmHg) and severe PIH (160/110mmHg or higher).

RESULTS

A total of 44 pregnant women with PIH were participated in these study and we noted the following observations in our study.

In this study higher percentage of PIH was noted among 23-27 years of age group (28.12%) and 28-32 years of age group (17.18%). Majority of patients participated in study were Hindu (96.87%) and residing in Rural area (82.81%). Pregnancy induced hypertension was more prevalent among Nulliparous (57.81%). Out of 27 women 12 (44.44%) have past h/o of PIH, 20.12% had previous preterm delivery and 66.67% had previous LSCS. Clinical presentation in mother with PIH and found that 42.74% had lower abdominal pain, 18.75% had vomiting/ epigastric discomfort followed by headache (12.50%), convulsion (10.94%) and no any complain (10.94%). Out of 44 PIH patients 87.93% and 98.43% of had mild PIH with systolic B.P. 140-160 mmHg and diastolic B.P. 90-110mmHg respectively. While 15.51% had sever PIH with systolic B.P. more than 160 mmHg.

Out of 44 PIH patients 79.69% received only antihypertensive medication while 10.94% of patients received both antihypertensive and anticonvulsant medication. Only 9.37% does not received any medication for PIH during present pregnancy. Out of 44 PIH mother 54.69% had preterm delivery, 4.69% had post term delivery. 53.12% of babies are low birth weight, 07.81% are

IUGR. Out of 44 delivery 12(18.75%) of babies were required NICU admission for various causes. 1.56% were IUFD and 1.56% of neonatal death.

DISCUSSION

In this study majority of patients participated in study were Hindu (96.87%) and residing in Rural area (84.81%). The high prevalence of PIH was noted among 18-22 years of age group (51.56%) followed by 23-27 years of age group (28.12%) and 28-32 years of age group (17.18%). A study conducted by tertiary care hospital, Vellore district noted that PIH is more prevalent among pregnant mother aged less than 20 years of age (53.0%) and 21-30 years (47.0%). In present study among PIH patients 85.93% and 98.43% of had mild PIH with systolic B.P. 140-160mmHg and diastolic B.P. 90-110 mmHg respectively. While 15.51% had sever PIH with systolic B.P. more than 160 mmHg. (Khosravi *et al*, in their study showed 96.3% of PIH mother had 140-190mmHg SBP and 61.1% had 90-110 mmHg of DPB. While 3.7% of mother had SBP more than 190mmHg and 38.9% had more than 110mmHg of DPB).

In this study among PIH mother 79.69% received only antihypertensive medication while 10.94% of patients received both antihypertensive and anticonvulsant medication and 9.37% does not received any medication during present pregnancy.

Hypertension is the most common medical problem encountered in pregnancy and remains an important cause of maternal and fetal morbidity and mortality. It complicates almost 10% of all pregnancies. Pregnancies complicated by hypertension are associated with increased risk of adverse fetal, neonatal and maternal outcomes, including preterm birth, intrauterine growth restriction (IUGR), perinatal death, acute renal or hepatic failure, ante partum hemorrhage, postpartum hemorrhage and maternal death. Hypertensive disorders of pregnancy are one of the major causes of maternal morbidity and mortality leading to 10-15% of maternal deaths, especially in developing world. It may complicate about 3-10% of all pregnancies with variable incidence among different hospitals and countries. 19 in present study 54.69% mother had preterm delivery, 4.69% had post term delivery. 53.12% of babies are Low Birth weight, 07.81% are IUGR. Out of 64 delivery 18.75% of babies were required NICU admission for various causes with 1.56% were IUFD and 1.56% of neonatal death.

Protocol for management of pregnancy induced hypertension at Tertiary care hospital

S.No	Protocol	Degree of hypertension	
1	Admission to hospital	Hypertension: blood pressure of 140/90-159/ 109mmHg Severe hypertension: blood pressure of 160/ 110mmHg or more	Severe hypertension: blood pressure of 160/ 110 mmHg or more
2	Antihypertensive pharmacological treatment	Admit if any clinical concerns for the wellbeing of the woman or baby or if high risk of adverse events suggested by the full PIERS or PREP-S risk prediction models	Admit, but if BP falls below 160/ 110mmHg then manage as for hypertension
3	Target blood pressure once on antihypertensive treatment	Offer pharmacological treatment if BP remains above 140/90mmHg	Offer pharmacological treatment to all women
4	Fetal assessment	Aim for BP of 135/85 mmHg or less Offer fetal heart auscultation at every antenatal appointment Carry out ultrasound assessment of the fetus at diagnosis and, if normal, repeat every 2 to 4 weeks, if clinically indicated Carry out a CTG only if clinically indicated	Aim for BP of 135/85 mmHg or less Offer fetal heart auscultation at every antenatal appointment Carry out ultrasound assessment of the fetus at diagnosis and, if normal, repeat every 2 weeks, if severe hypertension persists Carry out a CTG at diagnosis and then only if clinically indicated

CONCLUSION

The prevalence of hypertensive disorder in pregnancy complication was high in pre-eclampsia state. Women with sever pregnancy Hypertension and pre-eclamptic mother were at highest risk of maternal morbidity and mortality and also higher risk of foetal outcome than those who not had hypertensive disorders in pregnancy. Poor self-care management of Hypertension during pregnancy and inadequate knowledge are the important threat for perinatal and foetal outcome.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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