

Impact of Hypertension on Maternal and Fetal Outcome in Pregnancy

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ABSTRACT

Introduction: Hypertension in pregnancy is one of the major obstetric conditions threatening the life of both mother and fetus. Hypertensive disorders complicate 51% of all pregnancies and cause 16% of maternal deaths in developed countries (WHO).

Methods: The present study comprise of 100 cases of antenatal women who presented with hypertension in pregnancy at government medical college Churu, from January to march 2018. Detail information regarding demographic data, antenatal history, obstetrics and menstrual history were taken, and close follow up were noted regarding mode of delivery, treatment received, maternal and perinatal outcome & complications. 65% of patients were gestational hypertension, 39 % were pre –eclampsia and eclampsia syndrome, 1% chronic hypertension, and 7% of patients had comorbid condition like diabetes (4%) and renal disorder (7%).

Results: We found that 60% patients were diagnosed having gestational hypertension. 39% had preeclampsia eclampsia syndrome. 1% had chronic hypertension. 4% of patients had comorbid condition like diabetes. Gestational hypertension (60%): out of which developed (preeclampsia)(15%).

Conclusion: Hypertension disorder complicates 15 % of all pregnancy and is associated with maternal and fetal outcome. It is an acute obstetrics emergency in which switch treatment and prompt decision making is required to get best maternal and outcome.

Keywords: Hypertension, Fetus, Eclampsia.

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INTRODUCTION

Hypertension in pregnancy is one of the major obstetric conditions threatening the life of both mother and fetus. Hypertensive disorders complicate 51% of all pregnancies and cause 16% of maternal deaths in developed countries (WHO).¹

CLASSIFICATION

- Gestational hypertension
- Preeclampsia and eclampsia syndrome
- Chronic hypertension of any etiology
- Preeclampsia superimposed on chronic hypertension.
- Diagnosis of hypertensive disorders
- When blood pressure exceeds 140 mmHg systolic and 90 mmHg diastolic (korotkoff V).²
- Previously incremental increases of 30 mmHg systolic or 15mmHg diastolic from midpregnancy values had also been used as diagnostic criteria even when absolute values were < 140/90 mmHg but this is no longer recommended.
- But a sudden rise in mean arterial pressure later in pregnancy (delta hypertension) may also signify preeclampsia even if blood pressure <140/90mmHg.

RISK FACTORS FOR HYPERTENSION

- Primigravida
- Obesity
- Placental abnormalities
- Hyperplacentalosis
- Placental ischemia
- New paternity
- Thrombophilias (protein C,S deficiency, factor V leiden, antiphospholipid syndrome)

DEFINITION OF GESTATIONAL HYPERTENSION

- Blood pressures of at least 140/90 mm Hg or greater for the first time after midpregnancy but in whom proteinuria not identified.
- BP returns to normal by 12 weeks post partum.
- Almost half of these women subsequently develop preeclampsia syndrome.³

PREECLAMPSIA

- Preeclampsia is described as pregnancy specific syndrome that can affect virtually every organ system.

- Preeclampsia is much more than simply gestational hypertension with proteinuria.

CRITERIA FOR SEVERE PREECLAMPSIA

- Blood pressure of ≥ 160 mmHg systolic or ≥ 110 mmHg diastolic
- Presence of Proteinuria
- Oliguria
- Headache
- Cerebral visual disturbances
- Epigastric pain, nausea and vomiting
- Serum transaminase elevation
- Elevated serum creatinine
- Thrombocytopenia
- Pulmonary oedema
- Convulsion (eclampsia)
- Fetal growth restriction

ECLAMPSIA: Seizures that cannot be attributed to other causes in women with preeclampsia

Seizures are generalized or tonic clonic and may appear before, during, or after labour.

CHRONIC HYPERTENSION: BP $\geq 140/90$ mm hg before pregnancy or before 20 weeks gestation or both.

METHODS

Study Design: This was a retrospective study.

Period of Study: January 2018 to March 2018.

Study Population: Total no. of cases = 100 cases of antenatal women who presented with hypertension in pregnancy at Government Medical College Churu. Detailed information regarding, demographic data, antenatal history, obstetrics and menstrual history were taken and close follow up was noted regarding mode of delivery, treatment received, maternal & perinatal outcome and complication.

Exclusion Criteria

- Chronic renal disease
- Chronic liver disease
- Thyroid disorder

RESULTS

We found that 60% patients were diagnosed having gestational hypertension. 39% had preeclampsia eclampsia syndrome. 1% had chronic hypertension. 4% of patients had comorbid condition like diabetes. Gestational hypertension (60%): out of which developed (preeclampsia)(15%) PREECLAMPSIA (30%)

- 1) Non severe Preeclampsia(15%)
- 2) Severe preeclampsia(15%) – out of which(3%) eclampsia Eclampsia(9%) :

Antepartum (8%)

Intra partum (1%)

MATERNAL OUTCOME

No case of HELLP syndrome was noted.

2% (postpartum) maternal mortality was occurred during postpartum period.

CAUSE OF DEATH

- 1) Post-partum hemorrhage with acute renal failure
- 2) Eclampsia with disseminated intravascular coagulation.

DISTRIBUTION ACC TO PARITY

Hypertension in pregnancy was more in primipara (60 %)

Figure 1: Mode of delivery

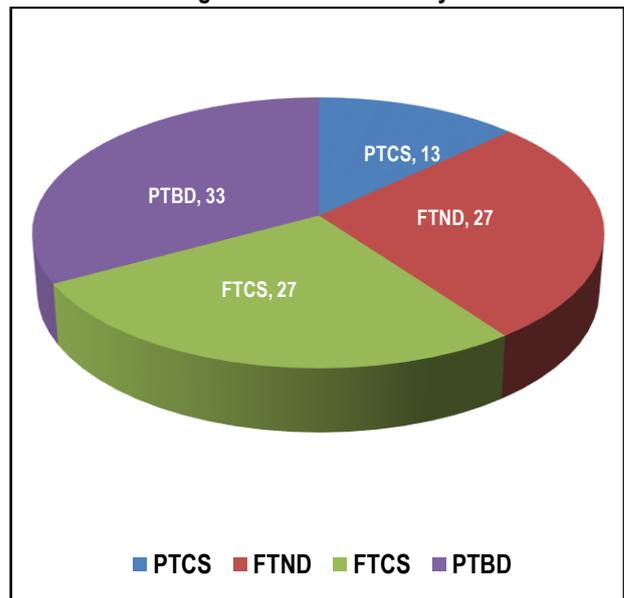


Figure 2: Gestational age at presentation

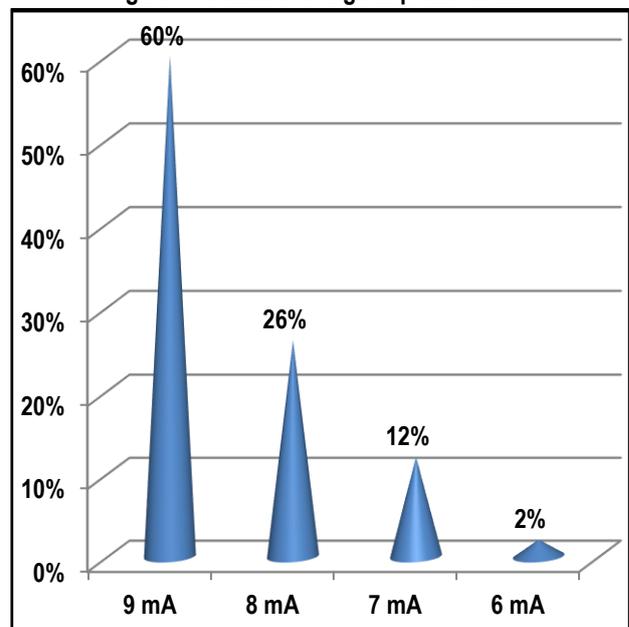
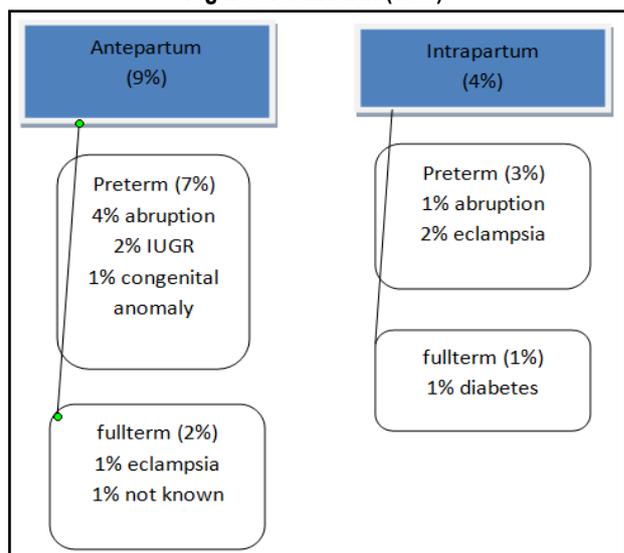


Figure 3: Still birth (13%)



DISCUSSION

Hypertension in pregnancy is one of the alarming obstetric conditions requiring immediate management. Pregnancy complicated by gestational hypertension is managed based on severity, gestational age, and presence of preeclampsia. Management requires switch to antihypertensive drugs. The use of antihypertensive drugs in attempts to prolong pregnancy or modify perinatal outcome in pregnancies complicated by various types and severities of hypertensive disorders. Severe Preeclampsia < 34 wks admits to l & d 24-48 hrs.⁴Corticosteroids, MgSo₄ prophylaxis, antihypertensives ultrasound, FHR monitoring, symptoms, laboratory tests Contraindications to continued expectant management. Persistent symptoms or sever hypertension Eclampsia, Pulmonary edema, abruptio placentae Fetal compromise.

The basic management objectives for pregnancy complicated by preeclampsia Termination of pregnancy with the least possible trauma to mother and fetus. Birth of an infant, who subsequently thrives, Complete restoration of health to mother.

- In case of eclampsia, securing of airway, stabilising the general condition of the patient, control of seizures, termination of pregnancy is required Magnesium sulphate is highly effective in controlling convulsions in women with preeclampsia and eclampsia. It is the drug of choice.
- Magnesium sulphate administered parentally is an effective anticonvulsant that avoids producing central nervous system depression in mother or infants. It can given intravenously by continuous infusion or intramuscularly by intermittent injection.
- Magpie trial collaboration group study results, magnesium sulphate is now recommended for women with severe preeclampsia.⁵
- The 2013 Task Force recommends that women with either eclampsia or preeclampsia should be given magnesium sulphate prophylaxis.
- In this study 9 cases of eclampsia were given treatment of magnesium sulphate and 15% cases of preeclampsia were treated with magnesium sulphate prophylaxis.⁶
- Maintenance dose is continued till 24 hours of delivery or 24 hours after convulsions.
- However, modifying the risk factors such as avoiding pregnancy at extremes of age, well controlled diabetes, renal disease, and chronic hypertension pre conceptionally may be method of primary prevention.⁷

- Lack of knowledge, antenatal care, late referral and transport is responsible for high incidence in developing countries.⁸
- Education, proper antenatal checkup is needed for early diagnosis of hypertension and its prevention.

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