

## Maternal & Fetal Outcome in Cases of Hypertension in Pregnancy


**Medical Science**
**KEYWORDS :**
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### ABSTRACT

**AIMS AND OBJECTIVES :** To study the epidemiological factors ,complications, maternal and fetal outcome in hypertension in pregnancy.

**METHODS:** the present study comprise of 100 cases of antenatal women who presented with hypertension in pregnancy in our tertiary care center, civil hospital, ahmedabad from January to march 2015. 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%). In present study 54 cases were delivered full term out of which 27 cases had vaginal delivery and 27 cases were underwent caesarean section. 46 cases were delivered preterm out of which 33cases had vaginal delivery and 13 cases underwent caesarean section .

Induction was done in 41 cases out of which 20 cases were full term and 21 cases were preterm. In which 32 cases underwent successful induction and 9 cases needed caesarean section due to induction failure.

Maternal mortality was which included post partum hemorrhage, post partum convulsion, perinatal cardiomyopathy, post partum psychosis, PRES(26%).Perinatal morbidity comprising of low birth weight (21%) out of which intrauterine growth restriction (9%). 30% baby had NICU stay. maternal mortality was 2%, perinatal mortality was 18% out of which 13% were still birth.

**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. The incidence is less in developed countries due to improved antenatal care, lack of knowledge, antenatal care, late referral and transport is responsible for high incidences in developing countries .Education, proper antenatal check up is needed for early diagnosis of hypertension and its prevention .

### Introduction:

Hypertension in pregnancy is one of the major obstetric condition threatening the life of both mother and fetus.

Hypertensive disorders complicates 5-10% of all pregnancies and cause 16% of maternal deaths in developed countries (WHO).

**AIMS AND OBJECTIVES:** To study the maternal and perinatal outcome in 100 cases from January 2015 to March 2015.

To study the epidemiological factors and complications in women who presented with hypertension in pregnancy in our tertiary care centre at civil hospital, ahmedabad.

### 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).
- Previously incremental increases of 30 mmHg systolic or 15mmHg diastolic from mid-pregnancy 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:
  - hyperplacentosis
  - Placental ischemia
- New paternity
- Thrombophilias (protein C,S deficiency,factor V leiden ,antithrombophilipid syndrome

### DEFINITION 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.

### 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  $\geq 160$ mmHg systolic or  $\geq 110$  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 a women with preeclampsia .

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

### CHRONIC HYPERTENSION :

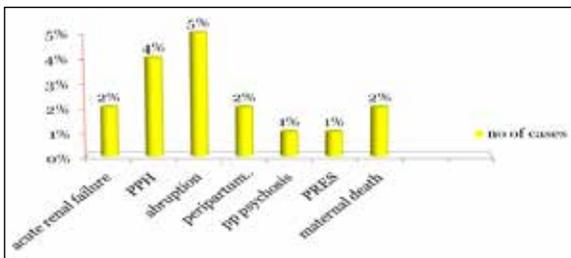
> BP  $\geq 140/90$  mm hg before pregnancy or before 20 weeks gestation or both.

### MATERIALS AND METHODS:

- Retrospective study.
- PERIOD OF STUDY – January 2015 to march 2015.
- Total no. of cases = 100 cases of antenatal women who presented with hypertension in pregnancy in our tertiary care centre, civil hospital, ahmedabad.
- 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**

- 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%) :
  - 1) Antepartum(8%)
  - 2)Intr partum(1%)



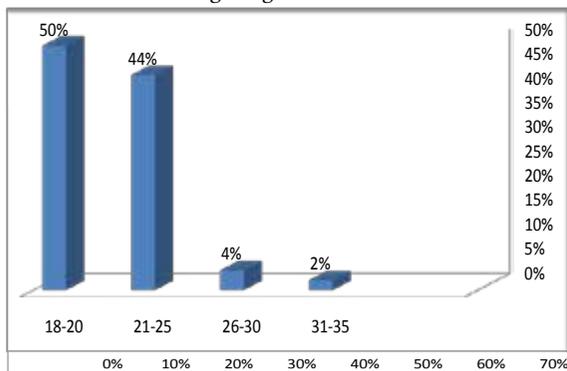
**MATERNAL OUTCOME:**

- No case of HELLP syndrome was noted.
- 2% (postpartum) maternal mortality were occurred during postpartum period .

**Cause of death :**

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

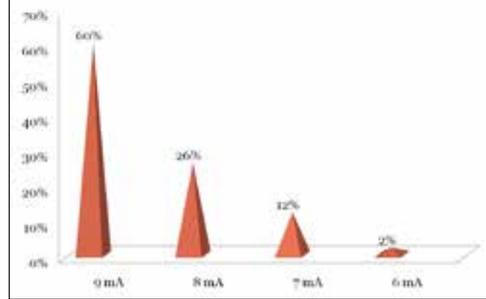
**Distribution according to age:**



**DISTRIBUTION ACC TO PARITY:**

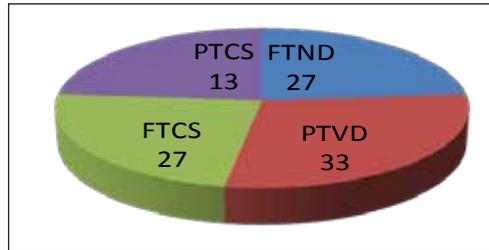
Hypertension in pregnancy was more in primipara (60 %)

**Gestational age at presentation**



**Mode of delivery:**

60 % of patients underwent vaginal delivery and 40% underwent LSCS.

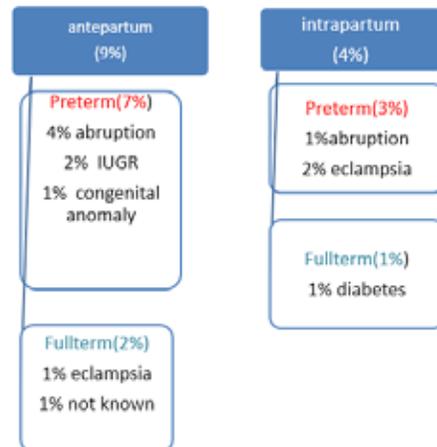


**INDUCTION OUTCOME**

- Induction was done in 41 cases out of which
- 20 cases were fullterm
- 21 cases were preterm.
- In which 32 cases underwent successful induction .
- 9 cases needed cesarean section due to induction failure.

**PERINATAL OUTCOME(100%):**

Still birth(13%)



Live birth 87%. Among them full term 48% and preterm 39%.

**DISCUSSION:**

- Hypertension in pregnancy is one of the alarming obstetric condition 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**

- Severe Preeclampsia < 34 wks
  - Admit to L&D 24-48 hrs. •Corticosteroids, MgSO<sub>4</sub>prophylaxis, antihypertensives •Ultrasound, FHR monitoring, symptoms, laboratory tests
  - *Contraindications to continued expectant management?*
  - Persistant symptoms or sever hypertension
  - Eclampsia, Pulmonary edema
  - Abruptio placentae
  - Fetal compromise
- Lack of knowledge, antenatal care, late referral and transport is responsible for high incidence in developing countries.
  - Education, proper antenatal checkup is needed for early diagnosis of hypertension and its prevention.

**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 continous infusion or intramuscularly by intermittent injection.
- Magpie trial collabration group study results, magnesium sulphate is now recommended for women with severe preeclampsia.
- 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.
- 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.

#### CONCLUSION:

- Hypertensive disorder complicates 5-10% of all pregnancy and is associated with devastating maternal and fetal outcome.
- it is an acute obstetrics emergency in which switch tretment and prompt decision making is required to get best maternal and fetal outcome.
- The incidence is less in developed countries due to improved antenatal care.

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