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## Research Article

# Fetomaternal Outcome In Hypertensive Disorders Of Pregnancy

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HTN (hypertension), IUGR (intrauterine growth restriction), PTVD (preterm vaginal delivery), FTND (full term normal delivery)

### ABSTRACT

Hypertensive disorders in pregnancy (HDP) is one of the most common cause for maternal mortality in India. Incidence by ACOG- 12-22%. 1 Accounts for 24% of maternal deaths. Maternal Complications-Preterm labour,abruption, DIC, Pulmonary edema, Thromboembolism, Cardiac failure, HELLP syndrome, Renal failure and Cerebral hemorrhage. • Fetal complications-Pre term baby, Intra Uterine Growth Restriction, Intra uterine fetal demise.

**Methodology:** This retrospective, cross sectional, observational study was conducted over a period of one year between August 2020 to July 2021 in the Department of OBGY at Ashwini Rural Medical College, Hospital and Research Centre, Kumbhari, Solapur. • A total of 61 pregnant women case records were retrospectively analyzed who presented with hypertensive disorders of pregnancy.

**Results:** The hospital based prevalence of hypertensive disorder of pregnancy is 14.52 %. Out of the 61 hypertensive mothers, developed life-threatening complications. PPH-19.67%, eclampsia-16.39%, Abruption-14.75%, HELLP Syndrome- 8.19%. All were successfully managed in the ICU. No maternal mortality. No major complication was observed among 26.22 % of the neonate and successfully managed.

**Conclusion:** Provision of quality ANC health care services, increasing patient awareness about warning symptoms, timely delivery and intensive monitoring in the intrapartum and postpartum period have the potential to improve maternal and perinatal outcome.

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## INTRODUCTION

Hypertensive disorders in pregnancy (HDP) is one of the most common cause for maternal mortality in India. Incidence by ACOG- 12-22%.<sup>1</sup>

Accounts for 24% of maternal deaths.<sup>1</sup>

- Pathogenesis-Abnormal placentation and the maternal response to it which is multisystemic.
- Etiology-Multifactorial Maternal and Fetal outcome
- Maternal Complications-Preterm labour ,abruption, DIC, Pulmonary edema, Thromboembolism, Cardiac failure, HELLP syndrome, Renal failure and Cerebral hemorrhage.
- Fetal complications-Pre term baby ,Intra Uterine Growth Restriction, Intra uterine fetal demise.
- Long term complications - Chronic hypertension, Insulin Resistance and Susceptibility of the female baby to develop preclampsia in future pregnancy.

## ACOG CLASSIFICATION

Type Of Hypertension	Clinical Manifestation
Gestational HTN	BP $\geq$ 140/90, > 20 WK GESTATION
Chronic HTN	HTN<20 WK GESTATION
Preeclampsia	BP $\geq$ 140/90, Edema Or Proteinuria/End Organ Damage
Eclampsia	Preclampsia + Seizures
Preclampsia Superimposed On Chronic HTN	sudden rise of BP +New Onset Proteinuria/ End Organ Damage

## AIMS & OBJECTIVES

- To determine the prevalence of hypertensive disorders of pregnancy.
- To determine the maternal and fetal outcome in patients with hypertensive disorders of pregnancy.

## METHDOLOGY

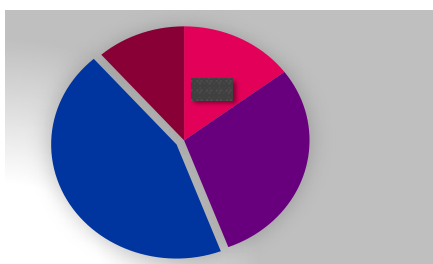
This retrospective, cross sectional, observational study was conducted over a period of one year between AUGUST 2020 to JULY 2021 in the Department of OBGY at Ashwini Rural Medical College, Hospital and Research Centre ,Kumbhari, Solapur.

- A total of 61 pregnant women case records were retrospectively analyzed who presented with hypertensive disorders of pregnancy.
- A proforma was maintained to record the maternal age, parity ,registration status, period of gestation at diagnosis, severity/type of hypertension, associated maternal risk factors / comorbidity, type of delivery conducted, maternal and perinatal outcome/complications.
- Anti-hypertensive drugs used were Nifedipine and/or Labetalol. Magnesium sulphate was the anticonvulsant used according to Pritchard's regimen. High risk cases managed in ICU
- The data collected were coded and entered in MS Excel and processed further with appropriate statistics.

## RESULTS

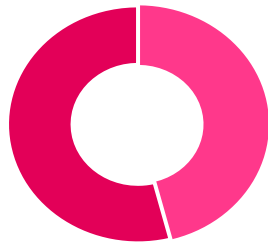
The hospital based prevalence of hypertensive disorder of pregnancy is 14.52 %.

### Age Distribution



15%- <20 yr  
30%-21-25 yr  
44%-26-30 yr  
11%->30 yr

Parity



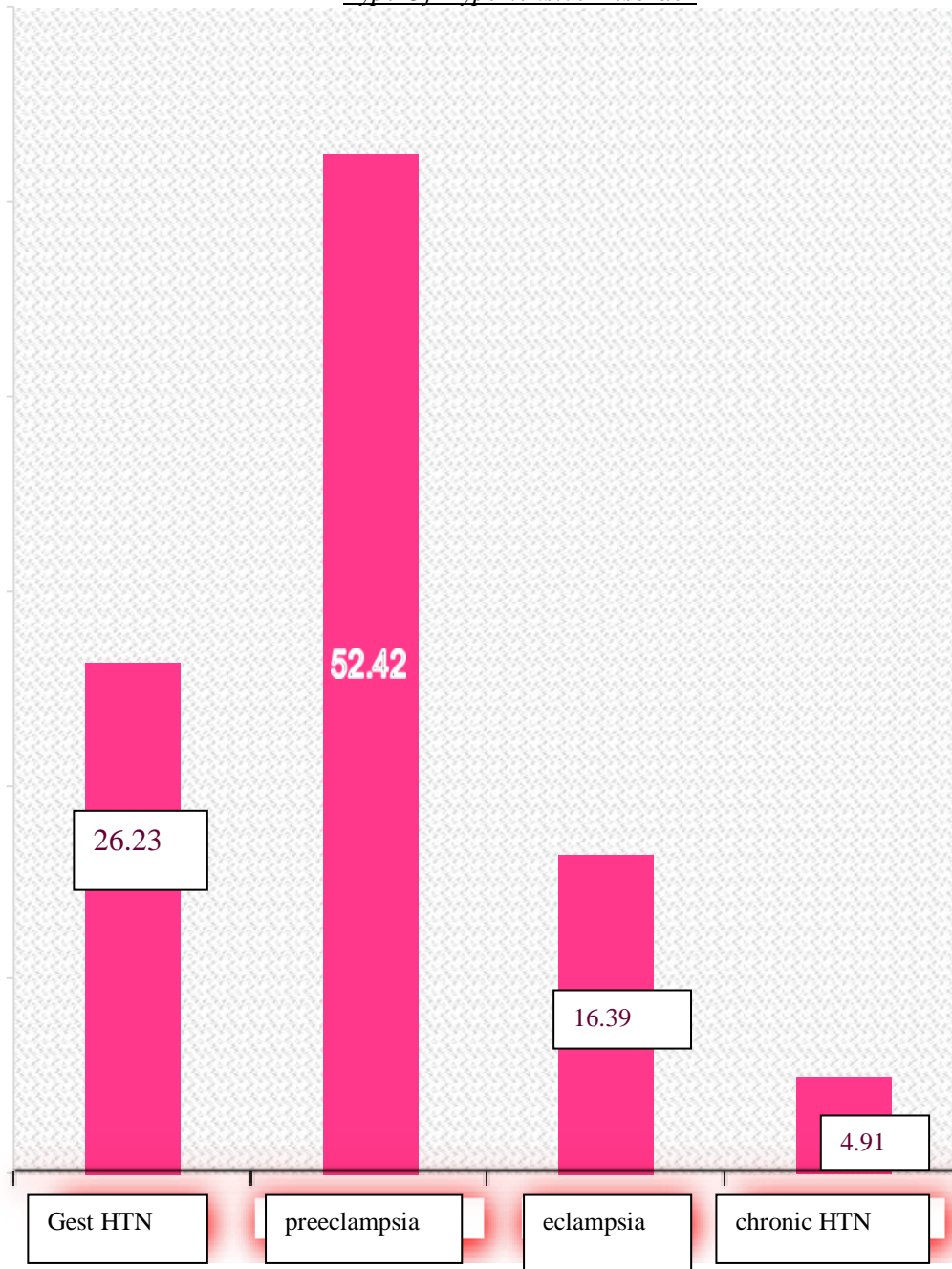
54%-Primi  
46%-Multi

Gestational Age At Presentation



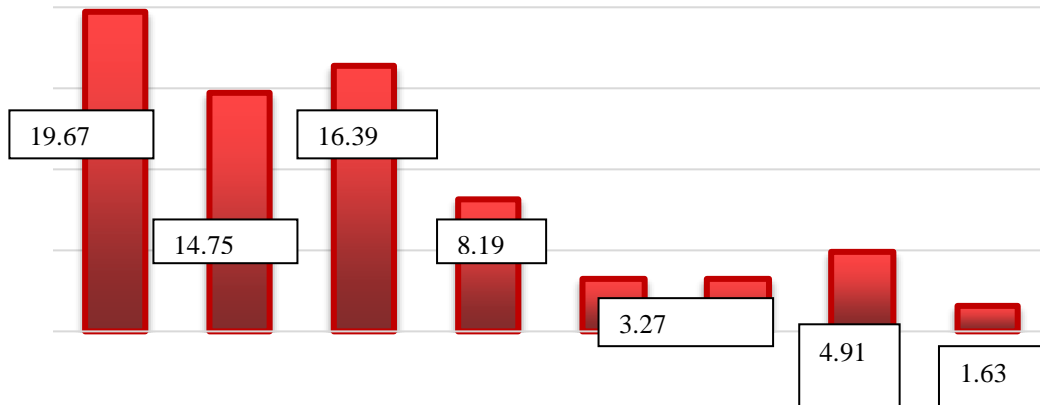
>=37WK-36%  
<37WK-64%

*Type Of Hypertensive Disorder*

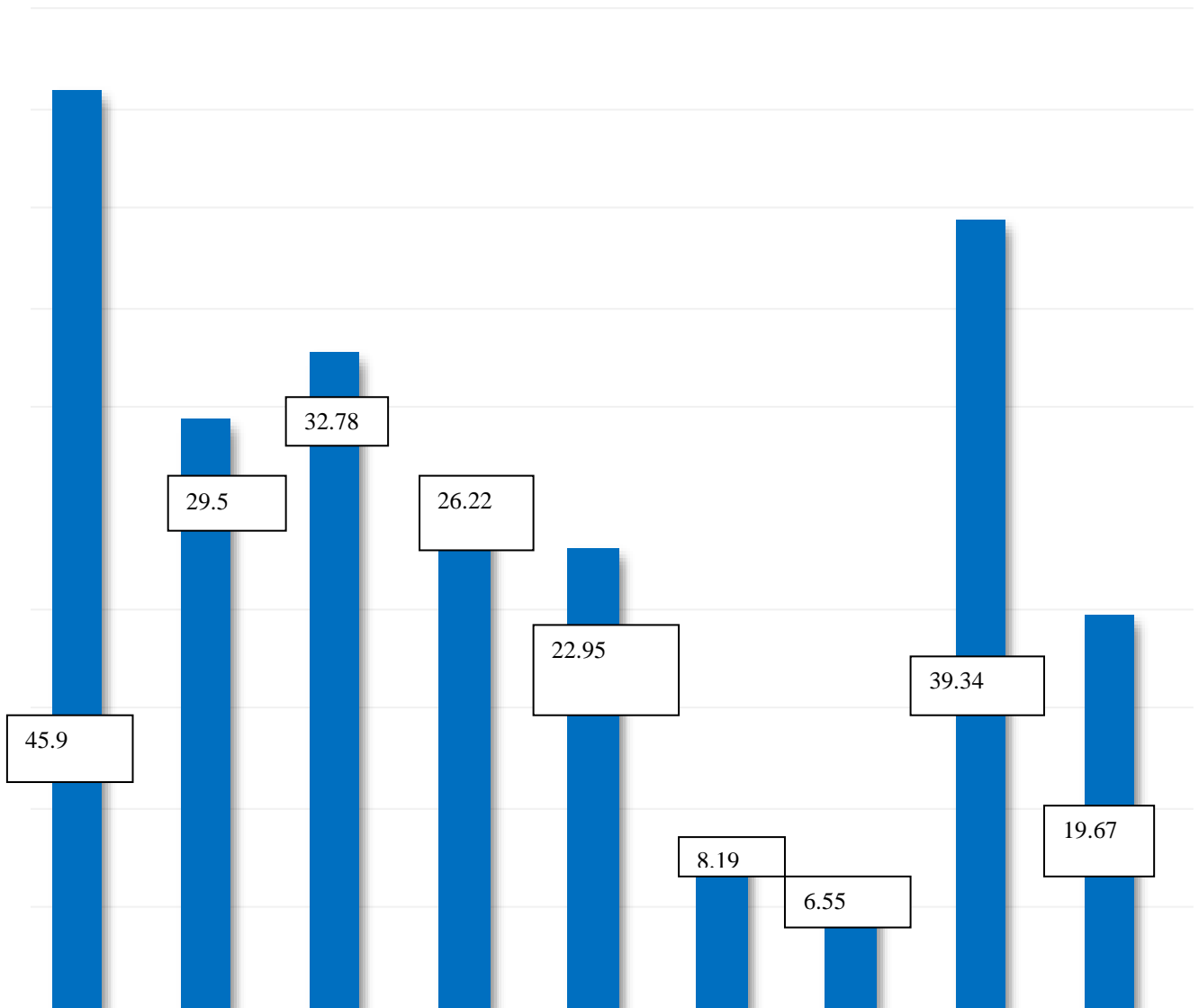


Out of the 61 hypertensive mothers, developed life-threatening complications. PPH-19.67%, eclampsia-16.39%, Abruption-14.75%, HELLP Syndrome- 8.19%. All were successfully managed in the ICU. No maternal mortality.

No major complication was observed among 26.22 % of the neonate and successfully managed. LBW-45.90%, IUGR-29.5%,IUD22.95%, Neonatal Death-8.19%.



**Maternal Outcome :** PPH-19.67%, eclampsia-16.39%, Abruption-14.75%, HELLP Syndrome- 8.19%.



**Neonatal Outcome :**

LBW-45.90%, IUGR-29.5%, IUD 22.95%,  
Neonatal Death-8.19%.

Apart from Hypertensive disorders of pregnancies, few patients also presented with medical and obstetric co-morbidities some of which can have causal relationship with hypertensive disorders.

Mode of Delivery was recorded in every case. Total of 30 patients (50%) underwent lower segment caesarian section .23% cases were underwent preterm vaginal delivery and 20% cases underwent full term normal delivery. 7% cases required vacuum delivery.

## DISCUSSION

Pregnancy induced hypertension is a pregnancy specific disorder involving multiple organs leading to adverse maternal and fetal outcome. Similar to the findings of Pillai SS et al 2.

Most common affected age group was 26-30 years followed by 21-25 years, this is probably because 20-30 years is the usual childbearing age group. Abalone RS et al 3 showed a similar finding as ours,

Where multigravida were more frequently affected by hypertension than primigravida. This could possibly be due to early & frequent childbirth in the developing countries.

The ultimate treatment of preeclampsia is delivery of the fetus irrespective of the gestational age and preterm

Delivery is one of the commonest complications. Our finding was in line with that of Dağdeviren et al 6, where 64% mothers delivered preterm while 36% were full term.

Aabidha PM et al 5 also found association of anaemia, gestational diabetes mellitus & multiple pregnancies with preeclampsia likewise us. Rani C et al 6 and many other researchers in their study showed that caesarean section was the most frequent mode of delivery, which was also the commonest route encountered in our study.

In the present study 19.67% women had postpartum hemorrhage, to follow was eclampsia which accounted for 16.39% of the cases, abruption in 14.75% cases while HELLP syndrome complicated 8.19% pregnancies, acute renal failure seen in 4.91%.

Pillai et al 2 encountered identical pattern of complications in their study. The rate of

perinatal mortality 8.19% in our study similar with the findings of Patel R et al 7, where they showed 1.56% of IUFD and neonatal deaths.

## CONCLUSION

Hypertensive disorders has significant impact on the maternal and perinatal morbidity and mortality.

Though prevention is not possible, it is important to recognise early warning symptoms and signs so that life threatening complications can be averted.

Provision of quality ANC health care services, increasing patient awareness about warning symptoms, timely delivery and intensive monitoring in the intrapartum and postpartum period have the potential to improve maternal and perinatal outcome.

Early identification, prompt intervention and referral to Higher tertiary care centres can significantly reduce the maternal and fetal morbidity and mortality.

Education and Empowerment of women and accessible health care services especially to socioeconomically deprived and rural population is the need of the hour.

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