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A Prospective Study of Hypertensive Disorders Complicating Pregnancy Admitted Through Labor Room in Government General Hospital, Kurnool

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Abstract
Introduction:
Hypertensive disorders of pregnancy (HDPs) affect about 10% of all pregnant women around the world and are an important cause of maternal and perinatal mortality and morbidity. In Asia and Africa, nearly one tenth of all maternal deaths are associated with hypertensive disorders of pregnancy. Predicting the onset of these complications could aid in timely interventions such as increased surveillance, treatment of symptoms, transfer to higher care facility and delivery when necessary, which could reduce morbidity and mortality from the HDPs.
Aim: *To determine incidence rate, complications, maternal and fetal outcome associated with hypertension in pregnancy in government general hospital, Kurnool.*
Material and Methods: *A prospective observational study was conducted in emergency labor room in department of obstetrics and gynecology at General Government Hospital, Kurnool from January 2018 to June 2018.*
Results: *The incidence rate of hypertensive disorders in pregnancy is 9.2% among antenatal women.A total of 110 antenatal women were diagnosed as having hypertension in pregnancy and were included in this study. Out of these 63 were primigravida and 47 were multigravida.. Most common maternal complication is found to be preterm delivery followed by abruption. Most common neonatal complications include low APGAR and low birth weight.Preeclampsia is the most common hypertensive disorder observed.*
Conclusion: *In this study preeclamsia is the most common of all pregnancy related hypertension on disorders followed by gestational hypertension. Fetal complications like low APGAR, preterm deliveries were statistically significant and associated with fetal management and outcome.*
Key words: *Gestational hypertension, preeclamsia, eclampsia .*

I. Introduction

Hypertensive disorders of pregnancy (HDPs) affect about 10% of all pregnant women around the world and are an important cause of maternal and perinatal mortality and morbidity. In Asia and Africa, nearly one tenth of all maternal deaths are associated with hypertensive disorders of pregnancy.[1] Predicting the onset of these complications could aid in timely interventions such as increased surveillance, treatment of symptoms, transfer to higher care facility and delivery when necessary, which could reduce morbidity and mortality from the HDPs.

Preeclampsia and eclampsia have remained a significant public health threat in both developed and developing countries contributing to maternal and perinatal morbidity and mortality globally. In one study the prevalence of preeclampsia was 5.6% and that of eclampsia was 0.6% in India.[2,3] which is similar to global numbers. However, the impact of the disease is felt more severely in developing countries, where, the risk that a woman in a developing country will die of preeclampsia or eclampsia is about 300 times that of a woman in a developed country.[4] Approximately 72,000 pregnant women die every year because of eclampsia and severe preeclampsia. That amounts to nearly 200 women every day. Since pregnant women in developing countries are amongst the most vulnerable populations in the world, community health care workers should be trained properly to provide timely care to women with HDPs. Prevention strategies should be applied to every pregnant woman since we cannot predict who

will develop pre-eclampsia given the limitation in resources.[5,6] Measuring blood pressure and testing urine for proteinuria should be made available to every pregnant lady and should be referred to the nearest health care facility where such women can be managed properly. Predicting the onset of maternal complications

such as eclampsia, stoke, damage to kidneys and lungs could aid in timely interventions such as increased surveillance, treatment of symptoms, transfer to higher care facility and delivery when necessary, which could reduce morbidity and mortality from the HDPs.

Hypertension in pregnancy continues to be public health concern in both developed and developing countries. Hypertensive disorder is the 2nd most common disorder seen during pregnancy.[9,10] They along with hemorrhage and infection, contribute greatly to maternal morbidity and mortality. With efficient antenatal care and early treatment of maternal hypertensive disorder the serious forms i.e eclampsia has become almost a clinical rarity in developed countries. However in developing country like ours and in the rural population, it still continues to be a major obstetric problem. Most deaths in hypertensive disorders in pregnancy occur due to its complications and not due to hypertension per se. Thus we can reduce the maternal mortality by prevention and proper management of these complications. Hence the present study was conducted to find out the incidence rate, high risk factor and the maternal and perinatal outcome associated with hypertensive disorder.[7,8]

II. Aims And Objectives

- To determine the incidence of hypertensive disorders in pregnancy.
- To study the risk factors, complications associated with hypertensive disorders in pregnancy.
- To study the maternal and fetal outcome associated with hypertensive disorders in pregnancy.

III. Materials And Methods

This prospective study was carried out in emergency labor room in department of obstetrics and gynaecology at government general hospital, Kurnool from January 2018 to June 2018. The study setting is one of the largest tertiary care center in the state of Andhra Pradesh, Govt General Hospital, Kurnool where pregnant women are referred from 100 to 200 kilometers surrounding the Hospital including tribal areas.

Inclusion criteria:

- All antenatal women with hypertension admitted to emergency labor room.
- All antenatal women with eclampsia.

Exclusion criteria:

- Antenatal women who were diagnosed with other causes of convulsions in pregnancy
- All normotensive antenatal women.

Antenatal mother with high BP recordings admitted to emergency labor room were observed. All relevant obstetric information like socio-demographic variables, obstetric history, signs and symptoms at presentation, any associated comorbidities, any medication used, family history, laboratory reports were noted. A suitable predesigned pretested proforma for data collection was prepared. Maternal outcome in present pregnancy in form of mode or delivery- preterm of term, whether induced or spontaneous were studied. Neonatal outcome in the form of prematurity, perinatal mortality, Low birth weight, low APGAR were studied.

IV. Results

The incidence rate of hypertensive disorders in pregnancy is9.2 % among antenatal women admitted in emergency labor room. majority of mothers were in age range between 15 to 25 years(81%).A total of 110 antenatal women were diagnosed as having hypertension in pregnancy and were included in this study. out of these 63 were primigravida and 47 were multigravida.

Age wise distribution mothers with hypertension complicating pregnancy:

Age group	cases
15-20	39(35.4%)
21-25	50(45.4%)
26-30	16(14.5%)
31-35	3(2.7%)
>35	2(1.8%)

Distribution according to gestational age:

Preterm(<37wks)	**34(31%)**
Term(37-42 wks)	76(69%)

Onset of labor and intervention of mothers with hypertensive disorders of pregnancy:

		Types of hypertension(hypertensive disorder of pregnancy)					
		Gestational hypertension 20(18%)		Preeclampsia 73(66%)		Eclampsia 15(14.2%) (1 died undelivered)	Chronis hypertension 2(1.8%)
		Mild 17 (85%)	Severe 3 (15%)	Mild 28 (38.3%)	Severe 45 61.64%)		
Onset of labor	spontaneous	8	1	12	7	1	0
	induced	7	1	12	30	13	2
Mode of delivery	Vaginal	13	2	21	31	10	1
	Caesarean section	4	0	7	14	4	1

Maternal complications in hypertensive disorders complicating pregnancy:

Maternal complication	Number of cases
Preterm labor	34(31%)
Imminent eclampsia	9(8%)
Abruption	6(5.45%)
Pulmonary edema	3(2.7%)
HELLP	2(1.8%)
PPH	1(0.9%)
AKI	1(0.9%)
Others	2(1.8%)

Neonatal outcome:

Low APGAR	20(18.34%)
IUD	9(8.25%)
Still birth	2(1.83%)
Low birth weight	14(12.8%)
abortion	1(0.9%)

8 mothers were having history of hypertension in previous pregnancies. Anemia, hydramnios, thyroid disorders, gestational diabetes were found to be the associated comorbidities in these cases. Most common maternal complication is found to be preterm delivery followed by abruption. Most common neonatal complications include low APGAR and low birth weight babies. family history of hypertension is associated with 2 cases.5 mothers were died due to complications of hypertension in pregnancy.

V. Discussion

In present study the overall incidence of hypertension is9.2% .Most of the cases were unbooked and did not received proper antenatal care before admission. This study revealed that hypertension is more common in primigravida. The deliveries were more likely to be induced. Preeclampsia is the most common hypertensive disorder observed. Hypertension is still a very common problem in rural population. The adverse maternal and perinatal outcome can be improved by early registration, health education of couple, regular antenatal checkups, early identification of hypertension and timely referral to tertiary care hospital, timely decision regarding mode of delivery and availability of specialist care during labor and after birth.

VI. Conclusion

In this study preeclamsia is the most common of all pregnancy related hypertension on disorders followed by gestational hypertension. Fetal complications like low APGAR, preterm deliveries were statistically significant and associated with fetal management and outcome.

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