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RESEARCH ARTICLE

A STUDY OF HYPERTENSIVE EMERGENCIES OF PREGNANCY IN A TERTIARY CARE HOSPITAL

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ABSTRACT

Introduction: The American College of Obstetricians and Gynecologists (ACOG) describes a hypertensive emergency in pregnancy as acute-onset, severe hypertension persisting for 15 min or more in setting of preeclampsia or eclampsia. **Aim:** To study the feto-maternal outcome in hypertensive emergencies in pregnancies. **Material and methods:** The study was conducted in Department of Obstetrics and Gynaecology, SMS Medical College, Jaipur from June 2018 to August 2019. It was a hospital based descriptive study conducted on 80 pregnant women with hypertensive emergency fulfilling inclusion criteria and exclusion criteria. Goal was to achieve a target BP of less than or equal to 150/100 mmHg. Any Side effects of drugs were noted in both the groups. Monitoring of fetal heart rate was done continuously by electronic cardiotocography until BP remained stable (continuous CTG monitoring). In case of non-reassuring maternal or fetal status the trial protocol was abandoned and appropriate measures were taken. Continuation or termination of pregnancy was decided according to gestational age, maternal and fetal condition. Fetal outcome was noted in terms of number of NICU admission, apgar score. Results Most of the patients were primigravida between age group 18 to 25 years with mean age of 25.83±4.81.77.5% patients were between 28 to 36 weeks of gestation. There was significant decrease in blood pressure after treatment with mean SBP before and after treatment was 185.5±20.18 and 135.37±9.4mmHg respectively. Also the mean DBP before and after treatment was 117.12±13.3 and 85.62±6.5 mmHg respectively. Among the study subjects , about 37.5% delivered vaginally while caesarean section was done in 25% women (table 5).32.6% had APGAR score <7 and number of NICU admission reported in study was 21.1%. There was no perinatal mortality reported in this study. Conclusion A timely intervention of hypertensive disorders complicating pregnancy and provision of specialized systemic antenatal maternal care could reduce the impacts of such complications.

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INTRODUCTION

The American College of Obstetricians and Gynecologists (ACOG) describes a hypertensive emergency in pregnancy as acute-onset, severe hypertension persisting for 15 min or more in setting of preeclampsia or eclampsia (Committee on Obstetric Practice, 2011). Severe hypertension in pregnancy is defined as a systolic blood pressure (SBP) more than or equal to 160 mmHg and/or a diastolic blood pressure (DBP) more than or equal to 110 mmHg (National Institute of Health and Clinical Excellence, 2010).

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A hypertensive emergency requires hospitalization, immediate antihypertensive treatment to reduce maternal blood pressure without substantially decreasing placental perfusion and compromising the fetus, and delivery of the infant as soon as possible. Antihypertensive drugs which can be used for control of hypertensive emergencies of pregnancy are nifedipine, labetalol and hydralazine.

Aim: To study the fetomaternal outcome in hypertensive emergencies in pregnancies

MATERIAL AND METHODS

The study was conducted in Department of Obstetrics and Gynaecology, SMS Medical College, Jaipur from June 2018 to

August 2019. It was a hospital based descriptive study conducted on 80 pregnant women with hypertensive emergency fulfilling inclusion criteria and exclusion criteria. Inclusion criteria- patients with singleton viable pregnancies with persistent systolic BP ≥160 mmHg or diastolic BP ≥110 mmHg or both Exclusion criteria- any medical disorders like cardiac disease, bronchial asthma, hematological disorder, diabetes mellitus, liver or renal disorders and thyrotoxicosis or any allergy or contraindications to Labetalol or Nifedipine. After proper counselling regarding the purpose of study, a written and informed consent was taken Standard Mercury sphygmomanometer of appropriate sized cuff was used to measure BP with the patient in sitting or semi reclining position with back support.

All basic investigations and sonography with doppler was done. Oral Nifedipine or iv Labetalol were given as per protocol. Goal was to achieve a target BP of less than or equal to 150/100 mmHg. Any Side effects of drugs were noted in both the groups. Monitoring of fetal heart rate was done continuously by electronic cardiotocography until BP remained stable (continuous CTG monitoring). In case of non-reassuring maternal or fetal status the trial protocol was abandoned and appropriate measures were taken. Continuation or termination of pregnancy was decided according to gestational age, maternal and fetal condition. Fetal outcome was noted in terms of number of NICU admission, apgar score.

RESULTS

80 pregnant women with hypertensive emergency were recruited in this study. in this study , it was seen that most of the patients were primigravida between age group 18 to 25 years with mean age of 25.83±4.81 (Table 1 and 2). 77.5% patients were between 28 to 36 weeks of gestation .(Table 3).
In the present study there was significant decrease in blood pressure after treatment with mean SBP before and after treatment was 185.5±20.18 and 135.37±9.4mmHg respectively. Also the mean DBP before and after treatment was 117.12±13.3 and 85.62±6.5 mmHg respectively.(table 4)
Among the study subjects , about 37.5% delivered vaginally while caesarean section was done in 25% women (table 5).32.6% had APGAR score <7 and number of NICU admission reported in study was 21.1%.There was no perinatal mortality reported in this study.(table 6)

Table – 1 Distribution of patients according to age group

Age group (in years)	No.	%
18 - 25	49	61.2
26 - 35	27	33.75
>35	4	5.00
Total	80	100.00
Mean age	25.83±4.81	

Table 2. Distribution of patients according to obstetric history

Obstetric history	No.	%
Primi	45	56.25
Multi	35	43.75
Total	80	100.00

Table 3. Distribution of patients according to gestational age

Gestational age in weeks	No.	%
28 - 36	62	77.50
36.1 - 40	15	18.75
>40	3	3.75
Total	40	100.00

Table 4. Pre treatment and after treatment Blood Pressure

Mean SBP At time of admission	185.5±20.18
Mean DBP At time of admission	117.12±13.3
Mean SBP after treatment	135.37±9.4
Mean DBP after treatment	85.62±6.5
	P value < 0.0001

Table 5. Distribution of patients according to mode of delivery

Mode of Delivery	No.	%
Pregnancy Continue	28	40.00
Vaginal Deliveryc	30	37.50
LSCS	22	25.00
Total	80	100.00

Table 6. Fetal outcome

Fetal Outcome		No.	%
APGAR Score <7		17	32.69
NICU Admission	Preterm	9	17.3
	MAS	2	3.80
	Total	11	21.11
Perinatal Mortality		0	0.00

DISCUSSION

The present study presented the data about the prevalence, maternal demographic characteristics and obstetrical outcome of the pregnant women with hypertensive disorders. The highest prevalence of the disorder was noted among the women from 18 to 25 years and among the primigravidas which was similar to the results obtained by Chaitra et al who found that 80.4% women fell in the age group of 21 – 30 years. and 32 (11.1%) were aged over 30 weeks of gestation. 46.85% were nulliparous. It was also seen that there was a good control of blood pressure with treatment as they showed significant decrease in both mean SBP and DBP (p value<0.0001). 37% delivered vaginally and 25% by caesarean section which were similar to a study by shekhar et al. (2013). 21.1% got admitted in NICU and most common reason of their admission was preterm (17.3%) which simulates study by Solwayo (2017).

Conclusion

A hypertensive emergency of pregnancy is one of the life threatening complications encountered in obstetrics and its management is a challenging task, because drastic reduction of BP leads to uteroplacental insufficiency & that may lead to intrauterine fetal death and continuation of pregnancy with severe hypertension leads to adverse feto-maternal outcome so timely intervention of hypertensive disorders complicating pregnancy and provision of specialized systemic antenatal maternal care could reduce the impacts of such complications.

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