

Maternal and Fetal Outcome in Early Onset Severe Pre-eclampsia

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Abstract

Background: Hypertensive disorders of pregnancy are among the most common medical problems in pregnancy with an incidence of between 5-10%.¹ The incidence varies amongst different hospitals, regions and countries. Hypertensive disorders in pregnancy are a major cause of maternal and perinatal morbidity and mortality worldwide.

Methods: This prospective observational study was conducted by the department of OBG at Sri Muthu Kumaran medical college hospital and research institute, Shikkaraya puram Chennai from December 2019 to May 2020.

Results: Out of 100 subjects enrolled into the study, Primigravidas constituted for 66% of pregnancies and multigravidas constituted for 34% of pregnancies. Maximum cases 60 (60%) were in the age of 25-30 yrs followed by 22 (22%) in the age group <20 years. The mean age of the patients was 24.57(SD 6.54) years. Caesarean was the most common mode of delivery constituting for 70% of deliveries whereas vaginal delivery constituted for 30% of cases.

Keywords: Pre-eclampsia; Postpartum hemorrhage; Hypertension.

INTRODUCTION

Hypertensive disorders of pregnancy are among the most common medical problems in pregnancy with an incidence of between 5-10%.¹ The incidence varies amongst different hospitals, regions and countries. Hypertensive disorders

in pregnancy are a major cause of maternal and perinatal morbidity and mortality worldwide.² The clinical findings of pre eclampsia can manifest as either a maternal syndrome (hypertension and proteinuria with or without other multi-organ involvement) or Fetal syndrome (Fetal growth restriction, oligohydramnios, abnormal umbilical artery Doppler findings and reduced placental growth with infarctions). They are multi system pregnancy specific disorder with high maternal and perinatal morbidity and mortality. The World Health Organization (WHO) systematically reviews maternal mortality world wide, and in developed countries, 16% of maternal deaths were reported to be due to hypertensive disorders. This proportion is greater than three other leading causes that include hemorrhage 13%, abortion 8% and sepsis 2%.³ The basic treatment is to control hypertension and convulsions and plan the delivery appropriately

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and most of the Gynecologist prefer Cesarean section as the mode of management as early cesarean section contributes to perinatal salvage and maternal outcomes. Hence this study is carried out to analyze the impact of severe Pre-eclampsia on Maternal and Fetal Outcomes.

MATERIALS AND METHODS

This prospective observational study was conducted by the department of OBG at Sri muthukumaran medical college hospital and research institute, Shikkaraya puram, Chennai from December 2019 to May 2020. All cases of pregnancies complicated by severe preeclampsia were included in the study.

Inclusion Criteria

1. Gestational age \geq 24weeks and $<$ 34 weeks
2. Diastolic BP \geq 110 mmHg
3. Proteinuria \geq 3+ with any of the following

Persistent headache, Blurred vision, Eclampsia, Elevated liver enzymes, Low Platelets, Abruption Placenta, Oligohydramnios and IUGR.

Exclusion Criteria

1. Gestational age $<$ 24weeks and $>$ 34 weeks

Table 1: Cases with Relation to Parity

Gravida	Patients	Percentage
Primigravida	66	66
Multigravida	34	34
Total	100	100

Out of 100 subjects enrolled into the study, Primigravidas constituted for 66% of pregnancies

Table 2: Cases With Relation to Age Group

Age (yrs)	Patients	Percentage
$<$ 20 years	22	22
21 - 30 years	60	60
$>$ 30 years	18	18
Total	100	100

Out of 100 subjects enrolled into the study, maximum cases 60 (60%) were in the age of 21-30 yrs followed by 22(22%) in the age group $<$ 20

2. Preexisting chronic renal and hepatic disease.
3. Idiopathic hemolytic anaemia
4. Idiopathic Thrombocytopenic purpura
5. Epilepsy

Procedure

The detailed history and proper clinical findings were entered in a proforma case sheet.

The clinical examination was done and necessary investigations like urine examination and PIH profile were carried out. Details regarding mode of termination, maternal and foetal outcome were noted.

STATISTICAL ANALYSIS

The data was analyzed using SPSS software version 16. Statistics method used are frequencies,

Contingency table analysis and Chi-square test were used to interpret the results.

RESULTS

A total of 100 cases were included in this study at our hospital during the period of December 2019 to May 2020.

and multigravidas constituted for 34% of pregnancies.

years. The mean age of the patients was 24.57(SD 6.54) years.

Table 3: Cases With Relation to Mode of Delivery

Mode of delivery	Patients	Percentage
Vaginal	30	30
Caesarian	70	70
Total	100	100

Caesarian was the most common mode of delivery constituting for 70% of deliveries whereas vaginal delivery constituted for 30% of cases.

Table 4: Cases With Relation to Maternal Outcome

Maternal Outcome	Patients	Percentage
Normal	62	62
Eclampsia	13	13
Abruption	11	11
Wound infection	5	5
Death	4	4
Postpartum eclampsia	2	2
HELLP	1	1
ARF	1	1
DIVC	1	1
Total	100	100

28 (28%) women experienced complications. Eclampsia and abruption were highest accounting to 13 (13%) and 11 (11%) respectively. There were 4 (4%) maternal death in this study.

Table 5: Cases with Relation to Foetal Outcome

Foetal outcome	Patients	Percentage
Normal	52	52
IUFD	16	16
IUGR	13	13
Death	7	7
RDS	5	5
HIE	1	1
Septicaemia	4	4
Still born	2	2
Total	100	100

Out of the total 100 babies, 48 (48%) babies had complication. Out of 48 babies 16 (16%) were IUFDs, majority were in women who were referred as

IUFDs. Cause of IUFD being abruption in majority of cases. Neonatal deaths were 7 (7%) cases.

DISCUSSION

The maximum cases were in the age of 25-30 yrs followed by age group <20 years. The mean age of the patients was 25.57(SD 6.54) years which was consistent with the study done by Priyanka R et al., Moodley J et al. and Brown MA et al. whose study age group was between 21 and 30

years and the mean age was 26 years but it was in contrast with the study done by Jantasing S et al. who concluded that the mean age was 30 years. Primigravidas constituted for 66% of pregnancies and multigravidas constituted for 34% of pregnancies which was consistent with the study done by Priyanka R et al., Singhal et al. and Shaikh et al. who concluded that primigravidas were predominant in their study. Caesarian was

the most common mode of delivery which was in accordance with the study done by Hall DR et al.⁰ and Sibai BM et al.¹ constituting for more than 50% of deliveries. Eclampsia and abruption were the most common maternal outcome in our study which was consistent with the study done by Aabidha et al.² who noted eclampsia and abruption to be the most commonest maternal outcome where as it was in contrast with the study done by Priyanka R et al. who noted PPH to be the most common maternal outcome. Neonatal deaths were 7% of cases which was slightly higher when compared to the study done by Aabidha et al.² who noted neonatal deaths were 4% of cases.

CONCLUSION

From this study, we can conclude that pre-eclampsia is associated with severe maternal and fetal complication and the cases are alarmingly high in Primigravidas. There is need for educating the patients, good antenatal care and treatment of anemia will go a long way in improving maternal and perinatal morbidity and mortality. A Proper antenatal care, early intervention and prompt treatment is required to reduce maternal and perinatal outcome in patients with severe pre eclampsia and eclampsia

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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