

EVALUATION OF PREECLAMPSIA AND ITS OUTCOME IN TERTIARY CARE CENTRE

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Abstract

Background: Hypertensive disorders are the common medical complication of pregnancy affecting between 7 to 15% of all gestation. Together with haemorrhage and infection, hypertension forms the deadly triad that contributes to morbidity and mortality during pregnancy and childbirth. It is a pregnancy-associated syndrome that can affect virtually every organ system. To evaluate the risk factors, maternal and perinatal outcome in preeclampsia.

Materials and Methods: A prospective study of 100 cases of preeclampsia admitted under department of OBG in government maternity hospital, siddartha medical college, vijayawada, Andhra Pradesh. Inclusion criteria- All preeclampsia cases fulfilling the following criteria •Blood pressure >140/90 [two readings more than 6 hrs apart after 20 weeks of gestation] • Proteinuria is defined as 0.3g/DL or more or 2+ or more •Patient presented with HELLP syndrome. Exclusion criteria - Eclampsia and hypertensive disorders other than the preeclampsia. **Result:** In the present study, the main risk factors are evaluated and includes maternal age majority at 21-25 years of age(46%), and common among low socioeconomic status and primigravida women(60%),BMI(more common in preobese women with BMI 26-30(52%),gestational age of mother(incidence high among >32 weeks of gestation). Regarding mode of delivery, induced normal vaginal deliveries occurred in46% of cases followed by LSCS in 35% of cases. Maternal mortality is seen in 2 cases and perinatal mortality is 18% mainly due to prematurity. **Conclusion:** Early identification and detection of high-risk cases by GESTOSIS scoring helps in reducing the morbidity and mortality due to preeclampsia.

INTRODUCTION

Hypertensive disorders represent the most common medical complication of pregnancy affecting between 7 to 15% of all gestation and account for approximately a quarter of all antenatal admissions, Together with haemorrhage and infection, hypertension forms the deadly triad that contributes to morbidity and mortality during pregnancy and childbirth. It is a pregnancy-associated syndrome that can affect virtually every organ system.^[1-3]

Preeclampsia

- HYPERTENSION PLUS

- Proteinuria >300mg/24 hr or Urine Protein: Creatinine RATIO>0.3 OR Dipstick 1+OR
- Thrombocytopenia (Platelet Count <1 lakh / μ l)
- Renal Insufficiency (creatinine >1.1mg/dl or doubling of baseline)
- Liverinvolvement (Serum Transaminase Levels Twice the Normal)
- Cerebral Symptoms (Headache, Visual Disturbances, Convulsion)
- Pulmonary Edema

In India, the incidence of preeclampsia is reported to be 8-10% among the pregnant women. According to recent studies, the hypertensive disorders of pregnancy occurred in 7.8% with preeclampsia in 5.4% of the study population in India*. Various

biological markers in preeclampsia syndrome have been measured to predict its presence and adverse outcome. WHO systematically reviews maternal mortality worldwide, 16% of maternal deaths were attributed to hypertension. So early identification of high-risk preeclampsia cases and their treatment is at most important, mortality and morbidity can be reduced.^[4,5]

Aims and Objectives

To evaluate risk factors, maternal and perinatal outcome in preeclampsia

MATERIALS AND METHODS

A prospective study of 100 cases of preeclampsia admitted under department of OBG in government maternity hospital, siddhartha medical college, vijayawada, Andhra Pradesh.

Study Period

From June 2022 to November 2022

Inclusion Criteria: All preeclampsia cases fulfilling the following criteria

- Blood pressure >140\90 [two readings more than 6 hrs apart]after 20 weeks of gestation
- Proteinuria is defined as 0.3g/DL or more or 2+ or more
- Patient presented with HELLP syndrome

Exclusion Criteria

- Eclampsia and hypertensive disorders other than the preeclampsia

RESULTS

A total of 100 cases of preeclampsia are included in this study after fulfilling the criteria. Main risk factors taken into consideration are Maternal age, parity, socioeconomic status, BMI, Gestational Diabetes Mellitus, Family history of preeclampsia, Multiple gestation.

Table 1: Age distribution

Age	Number of Cases	Percentage
<20	24	24
21-25	42	42
26-30	25	25
31-35	7	7
>35	2	2
Total	100	100

Preeclampsia is common among 21-25 years of age (42%) followed by 26-30 years of age(25%)

Table 2: Demographic profile

Booking status	Number of cases	Percentage
Booked	18	18
Unbooked	82	82
Education	Number of cases	Percentage
Illiterate	39	39
Literate	61	61
Residency	Number of cases	Percentage
Rural	84	84
Urban	16	16

Most of the cases were unbooked (82%), literate community (61%) and belonging to rural population (84%).

Table 3: BMI

BMI	Number of cases	Percentage
<18	4	4
18-25	36	36
26-30	52	52
31-35	8	8

Majority of preclampsia were in group of BMI 26-30(52%).

Table 4: Gravida status

Gravida	Frequency	Percentage
Primigravida	60	60
Multigravida	40	40
Total	100	100

Preeclampsia is more common among primigravida (60%)

Table 5: Gestational age group

Gestational age in weeks	Frequency	Percentage
<28	2	2
28-32	22	22
32-36	34	34
>36	42	42
Total	100	100

Most of the affected women were in the third trimester 32-36 weeks of gestation (34%) and >36 weeks(42%)

Table 6: Severity

Type	Number of cases	Frequency
Non severe	55	55
Severe	45	45

Non severe variety (55%) is more common than severe variety (45%)

Table 7: Distribution according to mode of delivery

Vaginal 55
Spontaneous 9
Induced 46
Instrumental 9
LSCS 35
Hysterotomy 1
Total 100

Induced normal deliveries occurred in 46% of cases and 35% cases underwent LSCS

Table 8: Distribution of maternal adverse effects

Maternal adverse effect	Frequency	Percentage
Thrombocytopenia	12	12
Eclampsia	4	4
Abruption	6	6
HELLP Syndrome	11	11
Pulmonary edema	3	3
AKI	4	4
Peripartum cardiomyopathy	2	2
Atonic PPH	2	2
Consumptive coagulopathy	2	2
Postpartum collapse	1	1
Death	2	2

Complications mostly observed in severe variety of Preeclampsia and maternal mortality is seen in 2 cases, Among which one case has a complication of AKI and underwent dialysis and post dialysis expired due to cardiopulmonary arrest and the other expired due to Eclampsia with with peripartum cardiomyopathy with ARDS.

Table 9: Fetal outcome

Fetal outcome	Frequency	Percentage
Live births	82	82
FGR	42	42
Stillbirth/IUD	18	18

Out of 100 births, live births are 82(82%) and fetal growth restriction seen in 42% of cases and the perinatal mortality is 18% due to prematurity and low birth weight.

Risk factor	Susreeshmita mohanty et al(2019)	Parveen M Aabidha et al(2011)	Present study
Maternal age	20-25(46.7%)	21-25(46%)	21-25(42%)
BMI	25-30(46%)	26-30(22%)	26-30(52%)
Gravida	Primigravida-61% Multigravida-39%	Primigravida-61% Multigravida-39%	Primigravida-60% Multigravida-40%
Maternal mortality		Nil	2%
Perinatal mortality	1.19%	15%	18%

DISCUSSION

Despite advances in medical practice, preeclampsia/Eclampsia has remained a leading cause of maternal mortality throughout world. It is a common problem in developing countries because of illiteracy, poor antenatal care, lack of health awareness and poverty. The majority of patients in present study are unbooked (82%), belonging to low socioeconomic status, and has rural background (84%) and were of agegroup 21-25(42%),primigravida (60%) compared to susreeshmita et al study in which maternal age 20-25(46.7%), BMI 25-30 (46%),primigravida(61%)

and the perinatal mortality is 1.19%,and in Parveen M Aabidha study, common among the maternal age group 21-25 (46%),BMI 26-30(22%), Primigravida (61%), Maternal mortality is nil as the study is done at secondary care centre and most of the severe cases are referred to tertiary care centre and the perinatal mortality is 15%.Incidence of severe preeclampsia is more(45%) in present study as our hospital is a tertiary care centre with referrals from surrounding districts.

CONCLUSION

Early identification and detection of high risk cases by GESTOSIS score helps in reducing the morbidity and mortality due to preeclampsia. Early referral of cases at risk of preeclampsia for tertiary care management with multi-speciality treatment is essential for reducing the complications. Evaluation of high-risk factors at the primary health care level itself is essential.

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