

Obstetrical & Perinatal Outcome in Severe Preeclampsia & Eclampsia at Tertiary Care Center in Vijayawada

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Abstract:

Back Ground:

Aim: The Aim of the study was to find out the incidence of PIH & Preeclampsia and to evaluate the risk factors, predictors of severity and obstetrical and perinatal outcome in severe preeclampsia and Eclampsia..

Place and duration of study: OBG Department, Siddhartha Medical College / Government General Hospital, Vijayawada from March '2018 to Feb '2019.

Methodology: Out of total 8800 deliveries 880 were diagnosed to have pregnancy induced hypertension. Out of these 580 (66%) had gestational hypertension. 80(0.9%) cases had preeclampsia without severe features, 220(2.5%) cases had preeclampsia with severe features. The present study was conducted in 200 cases of preeclampsia with severe features. The cases were evaluated and managed as per the existing protocol in the department and Obstetrical and perinatal outcome were recorded and analyzed.

Results: The incidence of pregnancy induced hypertension was 10% and preeclampsia 3.5% in our study. 50% had anemia and 30% had obesity as risk factors. Maternal mortality was seen in 12 cases of severe preeclampsia, accounting to 50% of total maternal deaths in our centre. Other maternal complications were seen in 60% of cases. Most common was Eclampsia in 30% of cases followed by Abruptio in 20% & DIC in 18% and 20% of cases required transfusion of blood & Blood components for thrombocytopenia and coagulation failure. 10% cases required ventilator support for dyspnoea. Perinatal mortality was seen in 16% of cases. Perinatal mortality is due to prematurity, low birth weight and abruptio. NICU admissions were required in 20% of cases because of severe birth Asphyxia.

Conclusion: Regular antenatal checkup and regular blood pressure measurement will help in early detection of hypertensive cases. Treating anemia and educating women on significance of alarming symptoms will improve maternal and perinatal outcome. Hospitalisation, regular BP monitoring, investigations and timely delivery will improve significantly the maternal and perinatal outcome. A good maternal intensive care unit and neonatal intensive care unit will help to improve obstetrical and perinatal outcome in hypertensive disorders of pregnancy.

Key Words: Severe Preeclampsia, Eclampsia, Obstetrical and Perinatal outcome.

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I. Introduction

Hypertensive disorders are the most common medical disorders complicating the pregnancy. They are occurring in 10% all pregnancies. Among medical disorders complicating pregnancy it stands next to anemia in prevalence. Depending on the ethnicity the incidence of preeclampsia ranges from 3% to 7% of all pregnancies.

Preeclampsia is a complex pregnancy specific hypertensive syndrome of reduced organ perfusion related to vasospasm and activation of the coagulation cascade affecting multiple systems. Hypertensive disorders of pregnancy account for 15% of maternal mortality in developing countries 16% of perinatal mortality.

Preeclampsia is defined as systolic BP \geq 140mmHg or diastolic blood pressure \geq 90 mmHg and proteinuria \geq 0.3gm protein in 24 hour urine specimen after 20 weeks of gestation in a previously normotensive woman.

Preeclampsia is considered severe if the blood pressure is \geq 160mmHg systolic \geq 110mmHg diastolic, associated with cerebral symptoms or viral disturbances impaired liver function, persistent upper quadrant or epigastric pain, pulmonary edema, thrombocytopenia platelet count $<$ 1,00,000/ μ l, Sr.creatinine $>$ 1.1mg%.

Eclampsia is defined as occurrence of seizures in preeclamptic women.

II. Aims And Objectives

The Aim of the study is to find out the incidence of PIH & Preeclampsia and is to evaluate the risk factors, predictors of severity and obstetrical and perinatal outcome in severe preeclampsia and Eclampsia.

III. Materials And Methods

The present study was carried out on 200 pregnant woman with severe preeclampsia and eclampsia. On admission, detailed history regarding age, parity, period of gestation, signs and symptoms, Obstetric and family history was recorded from the patient or patient attendants. After that general physical abdominal and pelvic examinations were carried out. Investigations like complete haemogram, platelet count, liver function tests, renal function tests, coagulation profile, fundoscopy and 24 hrs. urine for protein were performed in all patients.

Obstetric management was carried out as per existing protocol in the department. Magnesium Sulphate was the drug of choice for controlling convulsions, if contraindicated phynetoin was given.

Blood pressure was controlled either by oral Nefidipine, or by oral or parenteral labetalol or in combination as per the need. Details of labour and maternal and perinatal outcome were noted down. At the end of the study the data was compiled and analysed.

IV. Observation And Results

Table 1 Distribution of cases as per demographic Profile

Variable		No.of Patients	Percentage
Cases	Booked	48	20%
	Unbooked	160	80%
Residence	Rural	164	82%
	Urban	36	18%
Education	Illiterate	120	60%
	Literate	80	40%
Socioeconomy	Low	120	60%
	High	80	40%
Maternal Age	20-25	90	45%
	25-30	70	35%
	>30	40	20%
Parity	0	160	80%
	1	24	12%
	2	16	8%
Gestational Age	<28	40	20%
	28-34	100	50%
	34-38	40	20%
	>38	20	10%

The majority of cases were unbooked 80% belonged to low socioeconomic status 60% had rural background 82% were less than 30 yrs. of age 80% and 80% are primigravida.

Table 2 : Risk Factors

Risk Factor	No.of Patients	Percentage
Anaemia	100	50%
BMI>30	60	30%
BOH	44	22%
Previous H/o. Preeclampsia	40	20%
Family H/o. Preeclampsia	20	10%

In our study anemia is the most common risk factor present in 50% cases. Next is obesity BMI>30 in 30% of cases followed by BOH, Previous H/o. Preeclampsia.

Table3 : Distribution of cases as per Symptoms

Symptoms	No.of Patients	Percentage
Convulsions / clampsia	60	30%
Headache	100	50%
Visual Disturbances	40	20%
Epigastric Pain	30	15%
Dyspnoea	24	12%
Oliguria	10	5%

Most Common presenting symptom was headache in 50% followed by convulsions in 30% and visual disturbances in 20% of cases.

Table 4 : Distribution of cases as per investigations

Investigations	No.of Patients	Percentage
Proteinuria $\geq 4+$	100	50%
Platelet Count < 1 Lakh	30	15%
Renal Function Tests		
Sr.Creatinine > 1.1	52	26%
Sr.Uric Acid > 6 mg%	60	30%
Liver Function Tests		
SGOT, SGPT > 100 IU/ml	40	20%
LDH > 600	36	18%
Sr.Bilirubin > 1.2	40	20%
Fundoscopy		
Normal	188	94%
Hypertensive changes	6	3%
Papilloedema	6	3%

Renal and Liver functions were deranged in 26% and 20% of cases respectively. Fundus was normal in 94% of cases.

Table 5 : Mode of Delivery

Mode of Delivery	No.of Patients	Percentage
Spontaneous	80	40%
Induced	120	60%
Preterm Deliveries	120	60%
Vaginal	80	40%
Cesarean sections	104	52%
Hysterotomy	16	8%

40% had spontaneous onset of labour and labour was induced in 60% of cases Out of these 60% had cesarean section 8% had hysterectomy. Hysterotomy is due to failed induction and previous c section.

Table 6 : Maternal & Perinatal Outcome

Maternal Complications	No.of Patients	Percentage
Eclampsia	30	60%
Abruption	40	20%
DIC	36	18%
Ac.Puledema	24	12%
Ac.Renal Failure	10	5%
Cardiac Arrest	1	0.5%
HELL	10	5%
Intracerebral Haemorrhage	1	0.5%
Wound Heamatoma	10	5%
Maternal Mortality	12	6%
Ascitis	10	5%
Blindness	10	5%
Perinatal Outcome		
Preterm Babies	120	60%
Low Birth Weight	80	40%
Severe Birth Asphyxia	40	20%
Perinatal Mortality	32	16%

There were Total of 12 Maternal deaths. Causes were DIC in 8, ARF in 2, Acute Pulmonary edema in 2 and one case is due to intracerebral haemorrhage and one case is due ro sudden cardiac arrest. Perinatal mortality is seen in 16% of cases.

V. Discussion

In our study the incidence of PIH was 10% and Preeclampsia was 3%, Eclampsia was 0.75% of all pregnancies similarly study by Bhattacharya S had reported the overall incidence of PIH to be 13.5%. Shalini K et al had reported the incidence of preeclampsia and Eclampsia to be 7 to 10% and 0.5% to 1.8% respectively.

In our study the rate of cesarean delivery and vaginal delivery were 60% & 40% respectively. Similar studies by Oladokun A, Miguil M et al and Dissanayate VH et al revealed cesarean section rates as 60%, 71% 78% respectively.

Eclampsia was the most common complication in our study which was followed by abruption and DIC which is comparable with study by Bansal V et al.

In our study DIC was seen in 18% of cases requiring transfusion of Blood & Blood Components. 5% had ARF requiring dialysis. 5% had Ascitis. These are comparable to Al-Mulim AA et al stated that placental abruption in 12% followed by DIC 10% renal failure in 4.1%.

In our study perinatal mortality was seen in 16% of cases. In study by Shaheen et al perinatal mortality was 41.6% and prematurity was the main risk factor.

VI. Conclusion

Despite advances in medical practice preeclampsia and eclampsia has remained a leading cause of maternal and perinatal mortality throughout the world. It is a common problem in developing countries because of illiteracy, poor antenatal care, lack of health awareness and poverty.

Regular antenatal checkup and regular blood pressure measurement will help in early detection of hypertensive cases. Treating anemia and educating women on significance of alarming symptoms will improve maternal and perinatal outcome. Hospitalisation, regular BP monitoring, investigations and timely delivery will improve significantly the maternal and perinatal outcome. A good maternal intensive care unit and neonatal intensive care unit will help to improve obstetrical and perinatal outcome in hypertensive disorders of pregnancy.

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