



EFFECT OF PREECLAMPSIA & ECLAMPSIA ON MATERNAL & FETAL OUTCOME AT TERTIARY CARE CENTRE IN SAGAR, MADHYA PRADESH, INDIA

Priyanka Tiwari	Assistant Professor, Department of Obstetrics & Gynaecology, BMC, Sagar, M.P.
Priyanka Patel	Assistant Professor, Department of Obstetrics & Gynaecology, BMC, Sagar, M.P.
Ravikant Arjariya	Professor, Department of Physiology BMC, Sagar, M.P.
Anju Jha*	Assistant Professor Department of Physiology BMC, Sagar, M.P. *Corresponding Author

ABSTRACT **BACKGROUND:** Pregnancy is a physiological event for utmost women. Almost 20% - 30% of the adult population and more than 5% - 8% of all pregnancies in the world suffered from hypertension. Preeclampsia –Eclampsia still represents a life threatening pregnancy complication, associated with severe maternal, fetal morbidity and mortality.

AIMS & OBJECTIVES: To determine the effect of Preeclampsia & Eclampsia on Maternal & fetal outcome.

METHODS: Present study is a retrospective observational study conducted in a tertiary level hospital in Sagar Madhya Pradesh, India. Antenatal women were screened for Preeclampsia and Eclampsia during period of 1st October 2020 to 30th March on 2021, to study the effect on mother & fetus.

RESULTS: 77 pregnant women were detected with Preeclampsia & Eclampsia in the study period. Among these 61% were Primigravida. The most common neonatal complication was low birth weight (48.05%)

CONCLUSION: Antenatal care and educating women will markedly improve perinatal morbidity and mortality, Prematurity, Growth restriction and low birth weight are neonatal complication to be anticipated and dealt with when the mother has pre eclampsia. A good neonatal intensive care unit will help improve neonatal outcome.

KEYWORDS : Fetal outcome, Maternal outcome, Preeclampsia, Eclampsia, Low birth weight

INTRODUCTION

Hypertensive disorders are one of the most important causes of perinatal and maternal mortality and morbidity in both developing and developed countries.

PIH (Pregnancy Induce Hypertension) is a pregnancy specific, multisystem disorder characterize by development of oedema, hypertension and proteinuria after 20 weeks of gestation.¹

Most deaths in PIH occur due to its complications & no due to hypertension per se. With the advent of antenatal care in large cities, severe degree of toxemia and eclampsia has become mostly preventable.

However, in developing country, it still continues to be a major obstetric problem.² Reduction in maternal mortality and morbidity can be done by prevention and proper management of the complications of PIH.

Hence, the present study was conducted to find out common clinical presentation and foetal outcome among PIH patients.

So we can make early diagnosis and thereby morbidity and mortality can be reduced among PIH patients.

METHODS

Present study was conducted in the Department of Obstetrics and Gynaecology at Bundelkhand Medical College and Hospital, Sagar MP, India.

A total 77 pregnant women who presented to our Hospital with Preeclampsia & Eclampsia during the study period from 1st October 2020 to 31st March 2021 were enrolled for the study with following inclusion and exclusion criteria.

INCLUSION CRITERIA

1. Women with ≥ 20 weeks of gestation having blood pressure $\geq 140/90$ mm Hg and proteinuria (urinary excretion of 300mg protein in a 24 hour specimen/1+/> using random urine dipstick evaluation). It is known as preeclampsia.
2. Known cases of Eclampsia which is defined as occurrence of new onset grand mal seizure in women with preeclampsia that cannot be attributed to other causes.³

EXCLUSION CRITERIA

1. Those pregnant mother having chronic hypertension,

2. Women with < 20 weeks of gestation

OBSERVATION AND RESULT

A total of 77 pregnant women with Preeclampsia & Eclampsia were participated in this study and we noted following observation in our study.

Table –1. Age wise distribution of cases

Age (Years)	Numbers (N)	%
18-20	18	23.5
21-25	38	49.4
26-30	11	14.3
>30	10	13
	Total= 77	100%

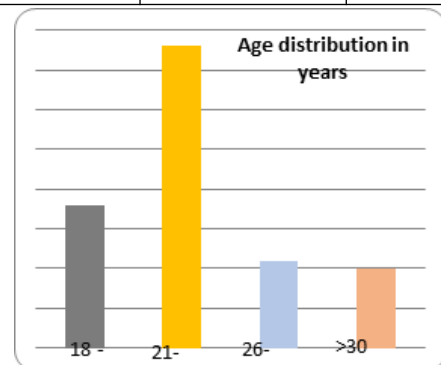


Table –2 Cases according to Gravidity

Gravidity	Numbers (n=77)	%
1 st	47	61
2 nd -4 th	23	29.9
$\geq 5^{\text{th}}$	7	9.1

Majority 61% of our patients were primigravida.

Table –3. Mode of delivery

Mode of Delivery	Numbers (n=77)	%
Vaginal	55	71
Instrumental	4	5
Caesarean	18	24

Majority 71% delivered vaginally

Table –4 Gestational age at onset of Labour (wks)

Gestational age at onset of Labour (wks)	Numbers (n=77)	%
20-32 weeks	9	11.7
33-36 weeks	20	26
37-40 weeks	38	49.3
41-42 weeks	10	13

Majority of patients (49.3%) were presented between 37-40 weeks of pregnancy.

Table 5 Birth weight of babies

Birth Weight (Kg)	Numbers (n=77)	%
< 2.5 Kg	37	48
> 2.5 Kg	40	52

48% babies are low birth weight

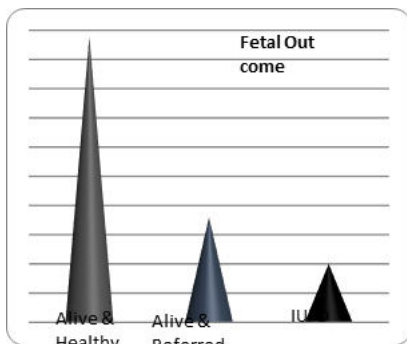
Table 6 Blood Pressure at the time of discharge

B.P. on discharge	Numbers (n=77)	%
High	16	20.7
Low	61	79.3

Table 7 Fetal outcome

Baby	Numbers (n=77)	%
Alive & Healthy	49	63.64
Alive & Referred	18	23.38
IUFD	10	12.98

23% babies required NICU admission with 12.98 were IUFD

**Table 8 Admission to delivery Interval**

Admission to delivery Interval	Numbers (n=77)	%
<12 Hrs	51	66.4
12-24 Hrs	15	19.3
>24Hrs	11	14.3

66.4% delivered within 12 hrs of admission

In our study we found 50.6% patients are of eclampsia and severe preeclampsia (N=39). Out of them 22.1% of total patients are of Eclampsia (N= 17).Out of total 77 patients 3 patients died which is 3.9 %. In this study case fatality due to Eclampsia is 17.64% (3/17).

The newborns of severe preeclamptic patients referred to NICU were 35.9% (14/39). IUFD cases were 20% in eclampsia and severe Preeclampsia (8/39).

49.4 % of total patients were of mild Preeclampsia cases (38/77) and newborn babies of these patients referred to NICU was 10.52% (4/38). 5.3% IUFD occurred in mild preeclampsia (2/38).

28.2% patients of severe Preeclampsia & eclampsia (N=11) were having high BP on discharge and Anti hypertension treatment started. While only 13.16 %

Patients of mild preeclampsia (N=5) having high BP on discharge and Anti hypertension treatment started.

Of all the patients 22 were of < 12 Hrs of admission and out of these 22 patients 7 were on Antihypertensive on discharge which is 31.8%, 9.01% patients(N=2/22) were died, 22.72% were IUFD (N=5/22) and 4.54% baby were referred to NICU (N=1/22).

The total patients having >12 Hrs of admission were 17.

Out of those 17 patients 23.52% (4/17) have been started Antihypertensive on discharge, 5.88% were died (N=1/17), IUFD cases were 17.64% (3/17) with newborns of 23.5% patients (4/17) were referred to NICU.

DISCUSSION

1. In present study we observed that Preeclampsia & Eclampsia was more common in Primigravida cases (61%) and it is due to several factors like teenage pregnancy, early marriage, illiteracy, social ignorance and ritual and lack of family planning adaptation.

Similar finding was reported by Parmar et al in their study conducted at NHL Municipal College, Ahmadabad 55 % in Primipara as compared to Multipara (45%).⁴

In contrast to this different study conducted by Gandhi et al and Khosravi et al 43.15% among primiparous 56.85% multiparous and 32.8% PIH mothers are nulliparas while 67.2% were multipara respectively.^{5,6} The findings are in good agreement with observations in a study by Shaikh S et al.⁷ Another study done by SR Singhal et al showed that 73% patients were Primigravidas.⁸

2. In present study among PE&E patients 49.4% having mild PE while 50.6% having sever PE&E.

3. The high prevalence of PE&E was noted among 21-25 yrs age group (49.9%) followed by 18-20 yrs of age group (23.3%) and 26-30 yrs of age group (14.3%)

Similar findings were obtained from reports of Nishtar hospital Multan.⁹ Study done by Singhal SR et al also showed that 90% patients were less than 30 years of age.⁸

Pregnancies complicated by hypertension are associated with increased risk of adverse fetal, neonatal and maternal outcomes, including preterm birth, intrauterine growth restriction (IUGR), perinatal death, acute renal or hepatic failure, antepartum haemorrhage, postpartum haemorrhage and maternal death.¹⁰

Hypertensive disorders of pregnancy are one of the major causes of maternal morbidity and mortality leading to 10–15% of maternal deaths, especially in developing world.¹¹

It may complicate about 3–10% of all pregnancies with variable incidence among different hospitals and countries.¹²

In present study 37.7 % mother had preterm delivery, 13 % had post term delivery. 48 % of babies were Low Birth weight. Out of 77 delivery 23.38% of babies were required NICU admission for various causes with 12.98% were IUFD.

Study by Shaikh S et al showed IUFD in 14, neonatal death in 18 cases and perinatal loss of 38.6%.⁷

Thus patients of PE&E had dreadful complications. Baby required to NICU admission in PE&E were 35.9%, while 20% were IUFD. 49.3 % of cases had gestational age between 37-40 weeks 37.7% of patients had preterm deliveries.

CONCLUSION

Pre-eclampsia and eclampsia still remains a major problem in developing countries. It is one of the important causes of maternal and perinatal morbidity and mortality probably resulting from inadequate and suboptimal antenatal care and lack of education and awareness amongst people belonging to low socioeconomic status.

Both maternal and perinatal mortality rate are still disappointing. One maternal death occurs in every 25 ecliptic women. This situation demands extension of medical services in rural areas for the benefit of both mother and the baby.

Good antenatal care will identify preeclampsia in early stages. The incidence of eclampsia can be reduced by better antenatal care, early recognition and prompt treatment of severe pre-eclampsia.

For ignorant or undiagnosed patients who present with convulsions, we can offer emergency services which will definitely help to reduce both maternal and perinatal mortality due to eclampsia.

Adequate assessment, investigation, monitoring and intensive care for

these women in the antepartum, intrapartum and postpartum period and timely delivery improve significantly the maternal and perinatal outcome.

Regular blood pressure monitoring specially in predisposed individuals is essential to detect such high cases early and thus prevent complications.

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Conflict of interest – nil

Ethical approval – Approval from Ethical committee of Bundelkhand Medical college, Sagar, M.P. with letter no IECBMC/2021/23 dated 27/07/2021.

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