STUDY OF MATERNAL AND FOETAL OUTCOME IN SEVERE PIH

Bhupesh H. Gaikwad¹, Rahul P. Maskar²

¹Associate Professor, Department of Obstetrics and Gynaecology, R. C. S. M. Govt. Medical College, Kolhapur.

²Assistant Professor, Department of Obstetrics and Gynaecology, R. C. S. M. Govt. Medical College, Kolhapur.

ABSTRACT

Preeclampsia is a multi-organ disorder of unknown aetiology characterized by development of hypertension more than 140/90 mmHg or more with proteinuria after 20 weeks, a previously normotensive and non-proteinuric patients. The maternal morbidity, mortality and perinatal mortality associated with severe preeclampsia can largely be preventable provided that women get regular antenatal care. The present study was carried out to study the maternal and perinatal outcome in severe preeclampsia in a tertiary care centre providing best possible care under expert supervision.

KEYWORDS

Preeclampsia, Maternal and Foetal Outcome, Eclampsia.

HOW TO CITE THIS ARTICLE: Gaikwad BH, Maskar RP. Study of maternal and foetal outcome in severe PIH. J. Evolution Med. Dent. Sci. 2016;5(37):2238-2240, DOI: 10.14260/jemds/2016/520

INTRODUCTION

Preeclampsia and eclampsia are leading causes of mortality and morbidity worldwide. Further hypertensive disorder of pregnancy are major factors in prenatal morbidity and mortality. The incidence of these complications will depend upon the time of onset, severity, duration and presence of other associated medical problems.

Epidemiological studies show that hypertension complicates nearly 10% of all pregnancies. The frequency of severe hypertension in pregnancy requiring parenteral anti-hypertensive is reported to be 3% of all pregnancies. The incidence of preeclampsia and eclampsia in developing countries are mainly calculated from hospital-based data and may not represent whole population. In India, incidence of preeclampsia amongst the hospital patients is about 7-10% of all antenatal admission and that of eclampsia is 0.94 to 1.8%.

There is obviously some difference in maternal and prenatal outcome; it is due to some variable factors associated with hypertension, eg. Maternal age, parity, extend of antenatal care, nature and timing of delivery, etc. Similarly, the degree of proteinuria, biochemical profile of the mother also affect the maternal and perinatal outcome of a given pregnancy.

An analysis of the correlation between all these factors with maternal and perinatal outcome would be an important step in preventing the perinatal and maternal morbidity.

METHODOLOGY

The present prospective study comprised of 157 cases of severe preeclampsia, who were admitted in Government General Hospital. The study was carried out from Sept. 2013 to Nov. 2014.

The criteria for selection of cases with severe preeclampsia

1. Systolic blood pressure of 160 mmHg or higher of diastolic 110 mmHg or higher on two occasions at least 6 hours apart while the patient is in bed rest.

2. Proteinuria to 5 gm or higher on a 24-hour urine specimen or 3+ or greater on two random urine samples collected at 4 hours apart.
3. Oliguria of less than 500 mL in 24 hours.
4. Cerebral or visual disturbances.
5. Pulmonary oedema or cyanosis.
6. Epigastric pain.
7. Impaired liver function.
8. Thrombocytopenia.
9. Foetal growth restriction.

Inclusion Criteria

- Singleton pregnancy.
- Gestational age more than or equal to 28 weeks.
- Women detected to have IUGR in present pregnancy.

Exclusion Criteria

- Chronic hypertension.
- Renal disease.
- Multiple pregnancy.
- Patient with hepatic, cardiac and renal diseases.

After admission of these patients to hospital a detailed history taken, age, parity, period of amenorrhea, chief complaints, any premonitory symptoms of eclampsia, essential antenatal care availed and related significant history was obtained from relatives and entered in a Proforma specially prepared for the study.

An assessment of the general condition of the patient was done by recording temperature, pulse, respiratory rate and blood pressure. Pallor oedema and icterus were looked; complete systemic examination was carried out. Lungs were auscultated and also cardiac status was assessed. Neurological examination was done. Fundoscopy was carried out.

Obstetrical evaluation was done to know the gestational age, presentation, position and condition of the foetus. Doppler studies weekly, USG OBS every two weeks for interval growth and amniotic fluid index, Tab. Nifedipine and Tab. Methyldopa for control of hypertension.

The patient who convulsed during antepartum, intrapartum or postpartum period were given Inj. MgSO₄ as per standard Pritchard's regimen.

The causes of maternal and perinatal deaths were analysed and efforts were made to find out the avoidable factors responsible for death.

Financial or Other, Competing Interest: None.

Submission 18-11-2015, Peer Review 19-11-2015,

Acceptance 08-01-2016, Published 09-05-2016.

Corresponding Author:

Dr. Bhupesh H. Gaikwad,

Flat No. 704, HR4 Building, Punya Parva,

Karonde Mala-416005.

E-mail: bhupeshgaikwad@rediffmail.com

DOI: 10.14260/jemds/2016/520

RESULTS

Total number of deliveries during study period were 6720. In all, 157 patients of severe pre-eclampsia (On account of inclusion and exclusion criteria) were admitted during Sept. 2013 to Nov. 2014. The incidence of severe pre-eclampsia was 2.33%.

Age in Years	No. of Cases (%)	Maternal Morbidity	Maternal Mortality	Perinatal Mortality
<15	-	-	-	-
15-19	60 (38.22%)	27 (45%)	02	20 (33.33%)
20-24	68 (43.31%)	18 (26.47%)	01 (1.47%)	12 (17.64%)
25-29	22 (14.01%)	06 (27.27%)	-	03 (13.63%)
30-34	06 (4.45%)	02 (33.34%)	-	02 (28.57%)
>34	01 (0.63%)	01 (100%)	01 (100%)	01 (100%)
Total	157 (100%)	54 (34.39%)	04 (2.54%)	37 (23.56%)

Most common age group of presentation was between 20-25 yrs. 43.31% followed by 15-19 yrs. of 38.22%. Mean age group was 21 yrs. Above figures show that maternal morbidity and perinatal morbidity is high at extremes of ages.

Parity No.	No. of Cases (%)	Maternal Morbidity	Maternal Mortality	Perinatal Mortality
Primi	102 (64.97%)	44 (43.13%)	04 (9.09%)	29 (28.43%)
Multi	55 (35.03%)	10(18.18%)	-	08 (14.54%)
Total	157 (100%)	54 (34.39%)	04 (2.54%)	37 (23.56%)

Occupational	No. of Cases	Percentage
Housewife	117	74.53%
Laborers	15	9.55%
Farm Workers	23	14.64%
Service	02	1.28%
Total	157	100%

Most of the patients were housewives (87.26%), while only 1.28% of patients were doing service.

Antenatal Care	No. of Cases (%)	Maternal Morbidity	Maternal Mortality	Perinatal Mortality
Availed	118 (75.16%)	28 (23.72%)	00	10 (8.47%)
Not Availed	39 (24.84%)	26 (66.66%)	04 (10.23%)	27 (69.23%)
Total	157 (100%)	54 (34.39%)	04 (2.54%)	37 (23.56%)

75% of patients were registered, while almost 25% of were unregistered. The maternal morbidity was 66.66% in unregistered and it was 23.72% in registered patients.

The perinatal mortality in registered patients was 8.47% and it was 69.23% in unregistered patients. Both these differences were statistically significant ($p < 0.05$, $\chi^2 = 5.087$).

In the present study, 157 mothers were admitted with severe preeclampsia during study period giving incidence (on account of inclusion and exclusion criteria) of 2.33% which is almost similar to study done by S Jain et al. who gave incidence of severe PIG as 3.18%.^[1] A study by A.N. Shrotri et al. found incidence of severe preeclampsia 2.7%, while in Sibal et al. study it was 1.4%.^[2]

In present study, the maternal morbidity and perinatal mortality was lowest in age group 20-24 yrs., where it increased towards extremes of reproductive age groups with severe PIH. It was significantly increased after 30 yrs. of age. Baird et al. also had made similar observation in their study.^[3] Das et al. and Hibbard have shown morbidity and perinatal mortality were high at extremes of age groups.

There is general agreement regarding significantly high incidence of preeclampsia in primigravidas. De-Alvarez (1979) in a clinical study found higher incidence of severe pre-eclampsia in primi about 65%. In present study, 65% of patients were primi and multi contributed in 35% of cases. The maternal morbidity was 43.13% in primi patients and it was 18.18% in multi patients. The perinatal morbidity in primi was 28.43%, while it was 14.54 in multi patients. Both differences were statistically significant.

Tanner (1996) observed that most of the cases of eclampsia were seen in uneducated women. Efforts to improve the female literacy and bringing the awareness regarding the importance of antenatal care could go a long way in reducing the incidence of severe preeclampsia.

The occurrence of severe preeclampsia in women receiving no antenatal care. Various studies in India have shown that majority of women with severe pre-eclampsia or eclampsia have not received any antenatal care. (Bhattacharya et al. 1992-87.3%; Biren Shah, 1993-76%; Sandhu et al. 1993-96%; Chawla Indu, 1993 - 77%).

In present study 24.48% of women have not received any antenatal care, while 75.16% of women have availed some antenatal care. The maternal morbidity was 66.66% in unregistered patients and it was 23.72% in registered patients. The perinatal mortality in registered patients was 8.47% and it was 69.23% in unregistered patients. Both these differences were statistically significant.

DISCUSSION

The incidence of severe preeclampsia in present study was 2.33%. Most common age group of presentation was between 20-25 yrs. (43.31%) followed by 15-19 yrs. (38.22%). Mean age group was 21 yrs. In present study, primis were affected in 65% of cases while multi in 35%.

Among the women with severe preeclampsia 75.16% has availed antenatal care, while 24.84% had not availed any antenatal care. The maternal morbidity and mortality as well as perinatal mortality was very high in unregistered cases. Prophylactic Inj. MgSO₄ (5 gm) IM given to all the pts. of impending eclampsia, i.e. 23.56%.

The caesarean section rate was 17.96%, while that of instrumental delivery rate was 15.28%. The use of prostaglandins for inducing labour in 128 (81.52%) women resulted in successful vaginal delivery in 71.97% within 24 hrs. and 11.46% in more than 24 hrs.

The perinatal mortality was 23.56% in present study. The overall incidence of low birth weight babies was 69.42%. While intrauterine growth restriction was noted in 42.67%.

The NICU admission rate in present study was 24.20% with most common indications for admission being asphyxia in 78.95%, while asphyxia with low birth weight in 65.79%.

KEYS TO MASTER CHART

ND	-	Normal Vaginal Delivery.
IUD	-	Intrauterine Death.
GABD	-	Gestational Age by Date.
GABS	-	Gestational Age by Sonography.
BP	-	Blood Pressure.
U. AIB	-	Urine Albumin.
LFT	-	Liver Function Test.
RFT	-	Renal Function Test.
NST	-	Non-Stress Test.

AG	-	Abdominal Growth.
SFH	-	Symphysio-Fundal Height.
Anti-HT	-	Anti-Hypertensive Drugs.
DIC	-	Disseminated Intravascular Coagulation.
IUGER	-	Intrauterine Growth Restriction.
Reg	-	Registered.

REFERENCES

1. Jain S, Kumari S. Perinatal outcome in severe PIH. J Obst and Gynaec of India 1987;37:537.
2. Shrotri AN, Bhavsar J, Patil SR. Perinatal outcome of pregnancies complicated by hypertension. J Obst and Gynaec of India 1987;31:116.
3. De-alvarez RR. Current obstetrics and gynaecological diagnosis and treatment 3rd edition, Lange medical publication, Singapore, 1987;37:537.