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MATERNAL AND PERINATAL OUTCOME IN GESTATIONAL HYPERTENSION AND PRE ECLAMPSIA

Gynaecology

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ABSTRACT

Background: Hypertension in pregnancy has profound effect on pregnancy. It contributes greatly to maternal and perinatal morbidity and mortality. Associated proteinurea causes worsening of some features of pregnancy. This study was done to compare risk factor and outcome of gestational hypertension and pre eclampsia.
Methods: This is a hospital based prospective comparative study of maternal and perinatal outcome in gestationa hypertension and preeclampsia.
Results: In our study, HELLP syndrome, other maternal complications, cesarean section rate, preterm birth were more common in pre eclampsia group compared to gestational hypertension group. This difference was statistically significant (p<.05).
Conclusions: Maternal and perinatal outcome was poor in presence of proteinurea. Presence of proteinuria is a predictor for poor maternal and perinatal outcome in hypertensive disorders of pregnancy.

KEYWORDS

Gestational hypertension, Pre eclampsia, hypertensive diseases of pregnancy.

INTRODUCTION:

Hypertensive disorder is one of the most significant problem of pregnancy. The incidence of hypertensive disorders in pregnancy varies between 5-10 %.[1] Hypertension in pregnancy has profound effect on pregnancy. It contributes greatly to maternal and perinatal morbidity and mortality. Associated proteinurea causes worsening of some features of pregnancy. Gestational hypertension includes hypertension and absence of proteinuria. Preeclampsia includes hypertension with proteinuria.

Previous epidemiological studies examined the risk factors of GH and PE, providing information with respect to potential etiologic mechanisms of HDP . This study was done to compare risk factor and outcome of gestational hypertension and pre eclampsia. Result of this study will aid in management of hypertensive disorder of pregnancies. High risk women can be identified based on risk factor and aggressive treatment can be provided to them. Unnecessary intervention can be avoided in patient with low risk factors.

METHODS

This is a prospective observational study carried out in a tertiary care teaching institute Mahila Chikitsalaya ,SMS medical college, Jaipur for a period of 6 month from july 2016 to september 2016. Total 50 cases of pre eclampsia and 50 cases of gestational hypertension who fulfilled the selection criteria were enrolled in the study.

Sample size n1=50; for patients with gestational hypertension. n2=50; for patients with preeclampsia.

Inclusion criteria

All pregnant women admitted in the hospital diagnosed as gestational hypertension and preeclampsia.

Exclusion criteria
Eclamptic patients

Pregnant women completing diagnostic criteria for gestational hypertension or preeclampsia were admitted in obstetrics and gynaecology. A written informed consent was taken from all patients. Detailed history was taken and complete physical as well as pelvic examination was done. Routine blood and systemic investigation was done. BP was measured in supine position. Urine proteins were measured by dipstick method. Maternal and fetal parameter noted. Data analysis done.

Gestational hypertension was defined as systolic blood pressure of at least 140 mmHg and/or diastolic blood pressure of at least 90 mmHg on 2 occasions at least 6 hours apart after the 20th week of gestation in women known to be normotensive before pregnancy and regressing after delivery. Preeclampsia is onset of hypertension after 20 weeks gestation with proteinuria of more than 300 mg/day and or oedema.

Data analysis

Gestational hypertension and preeclampsia group were compared statistically by applying Pearson's Chi square test and student's t test. A 'p' value of <0.05 was considered statistically significant.

RESULTS:

A total of 100 pregnant women were studied during the study period. Out of which 50 women had gestational hypertension and 50 women had preeclampsia.

The average age of women with gestational hypertension and preeclampsia was 25.24 years and 23.94 years respectively (p>0.05).

Systolic blood pressure in gestational hypertension and pre eclampsia group was 157.6 and 162.4 mmHg respectively. This Difference was not significant.(p>0.05). Diastolic blood pressure in gestational hypertension and pre eclampsia group was 102 and 105.8 mmHg respectively (p>0.05). This Difference was not significant.(p>0.05). Blood pressure difference was not statistically significant . (p>0.05). Maternal complications like abruption, HELLP syndrome were (p<0.05) more in preeclampsia group compared to gestational hypertension group. This difference was statistically significant (p<0.05).

For mode of delivery, cesarean section rate was more in pre eclampsia group compared to gestational hypertension group. Difference was statistically significant P value (< .05).

Mean gestational age at delivery was 36.2 and 35.14 week in GH and PE group respectively. The difference was not statistically significant. Pre term delivery was more common in pre eclampsia group (p < .05) .

DISCUSSION

With regards to age and parity , no significant difference was noted between gestational hypertension and pre eclampsia group. Similar result was noted by C.M. Liu, et al[2]. They also found no significant differences in the clinical manifestations of disease with respect to maternal age, gravida of both the groups.

In this study , HELLP syndrome was more common in pre eclampsia group. Overall complications were also more common in pre eclampsia group. Pre term birth was also more in pre eclampsia group. C.M. Liu, et al[2] also found that proteinuria may play a role in the progression of gestational hypertension to severe forms of pre eclampsia associated with subsequent maternal complications and extremely-low-birth-weight babies.

Shen et al.[3] found that pre eclampsia was strongly associated with several adverse outcomes including cesarean section, placental abruption, preterm birth.

Pairu J et al.[4] also found that Maternal complications like eclampsia, abruption, pulmonary oedema were significant ($p<0.05$, $p<0.01$) more in preeclampsia group compared to pregnancy induced hypertension group.

After comparing the maternal and fetal parameter of the both the group, we noted that gestational hypertension and pre eclampsia shared some common risk factor. Cesarean section rate and maternal complication were more common in pre eclampsia group compared to gestational hypertension.

CONCLUSION

Maternal and fetal outcome shows that women who developed pre eclampsia were potentially at higher risk than those who developed gestational hypertension. So presence of proteinurea should be treated as poor prognostic factor independent of blood pressure.

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Table 1: Comparison of baseline data.

Parameter	Pregnancy induced hypertension (n=50) group	Preeclampsia (n=50) group	P value
Maternal age in years	25.24±4.26	23.94±2.944	0.079 (> 0.05)
Systolic BP (mmHg)	157.6±15.33	162.4±12.55	0.090 (> 0.05)
Diastolic BP (mmHg)	102±12.45	105.8±10.12	0.097 (> 0.05)
Para	0.72±1.07	0.32±0.7939	0.036 (< 0.05)
Gestational age at delivery in weeks	36.2±2.955	35.14±3.681	0.116 (>0.05)
Caesarean section (%)	62 %	80%	0.078 (> 0.05)
Mean birth weight	2.405±0.7615	2.221±0.6504	0.197 (> 0.05)

Table 2: Comparing maternal outcome.

Maternal outcome/complications	Pregnancy induced hypertension (n=50) group	Pre eclampsia (n=50) group	P value
HELLP/partial HELLP	1	8	0.036 (< 0.05)
Abruptio placenta	1	4	0.359 (> 0.05)
No complications	48	38	0.009 (< 0.05)

Table 3: Comparing obstetric outcomes.

Obstetric outcome	Pregnancy induced hypertension (n=50)	Pre eclampsia (n=50)
Vaginal delivery	21	10
Caesarean section	29	40

Chi – square = 4.675 with 1 degree of freedom, p = 0.031

Table 4: Comparing perinatal outcome.

Perinatal outcome	Pregnancy induced hypertension (n=50)	Pre eclampsia (n=50)	P value
Preterm	23	39	0.002 (< 0.05)
Still birth	5	7	0.758 (> 0.05)
Meconium aspiration	4	9	0.234 (> 0.05)

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