

Incidence of Gestational High Blood Pressure

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ABSTRACT

To evaluate the incidence of Gestational high blood pressure, 500 pregnant women were randomly selected from Ch. Rahmat Ali memorial trust teaching hospital and at private clinic. Their physical examination performed, blood and urine samples were collected and were investigated. There was regular follow up of these patients till parturition. 180 out of 500(36%) females were identified to be the cases of gestational hypertension. 72% of the cases were primigravidae and 28% were multi gravidae. 23% of the cases were found to be of old age. Results indicate a good prevalence of high blood pressure among pregnant ladies in Lahore, which stresses more on the importance of a good and regular antenatal care.

Keywords: Gestational high blood, pre-eclampsia, primigravida.

INTRODUCTION

Hypertensive disorders complicating pregnancy are common and Gestational high blood pressure is still a main cause of maternal mortality and morbidity in developed as well as developing countries along with hemorrhage and infection^{1,4} and also contributes in poor outcome of fetus. Gestational hypertensions, Pregnancy Induced Hypertension, pre eclampsia, eclampsia are different terms used to describe the stages of Gestational high blood pressure^{2,5}. Before 20 weeks of gestation the eclampsia and pre-eclampsia however are rare. Hypertensive disease in pregnancy is also responsible for considerable perinatal mortality mainly due to prematurity and its affiliated complications^{3,6}. It seems that the development of significant proteinuria, which is usually accompanied with Gestational high blood pressure, increases the perinatal mortality at least threefold⁷. A method of protecting women from high blood pressure during pregnancy, based on insight into pathogenesis would thus be of great benefit to both mother and baby. It is believed that the pathogenesis of Gestational high blood pressure is dependent, at least in part upon the interaction between the surface endothelium in the uteroplacental circulation, the maternal platelets and the opposing action of eicosanoids produced by these tissues. An improved understanding of these and other factors controlling the pathophysiological processes in this common condition which affects 10% of the primigravidae to a minor degree and 2% severely has led to interest in prevention of this disease by prophylaxis aimed at these interactions^{8,10}

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Pakistan like other developing countries has about 75% of the population concentrated in rural areas where there is lack of basic health facilities and no concept of antenatal monitoring. Even in urban areas, only 50% of the women have knowledge about antenatal care and hospital delivery.

MATERIALS AND METHODS

Five hundred pregnant women were randomly selected from antenatal clinic of Ch. Rahmat Ali trust Hospital. Patients with high blood pressure after 20 weeks pregnancy were included in the study and these high risk pregnancies were separated from normal by taking detailed history, conducting regular antenatal examination especially recording Blood Pressure and looking for Oedema and by routine lab Investigations. Patients suffering from essential hypertension^{11,13} were not included. For estimation of, blood urea, serum creatinine and uric acid, blood samples from selected ladies were collected in the morning by venepuncture. The blood was then drained into the sterilized glass containers containing Heparin or EDTA. For proteinuria early morning samples of urine were collected. Patients had regular ultrasound examination during their antenatal visits and Doppler scan where required. Criteria used for labeling a patient having

1. Gestational high blood pressure:
2. Systolic blood pressure > 150 mm Hg (30 mm Hg above the base line value) on at least two occasion 6hr or more apart.
3. Diastolic BP>95mmHg (15mmHg above the base line value) on at least two occasion 6hr or more apart. Proteinuria 300mg or more/24hrs or 100mg/dl in two specimens collected 6hrs apart or + 1, +2.
4. Increased serum urea (>6mmol/L), uric acid (>40mmol/L) & serum creatinine (>100 umol/L).

RESULTS

Table 1 shows the overall incidence of Gestational high blood pressure and Incidence in different groups of patients. Out of five hundred pregnant ladies 180 were selected for study that showed elevated blood pressure constituting overall incidence of 36%. Out of these 180 patients with PIH, 132 patients were primigravida i.e. patients having their first babies, and the incidence was 71.62%. 28.4% were multigravidae. It is also clear from Table-1 that 10 out of 180 patients were hypertensive and were having multiple pregnancy (bearing more than one fetus), which constituted 5.40% of the total 42 elderly multigravidae were also found to have hypertension, which makes about 22.97%. From the present data it is concluded that Gestational high blood pressure is basically a disease of primigravida. The next most susceptible group is elderly multigravida. Table 2 shows the complications of Gestational high blood pressure. Those 180 ladies who were labeled as PIH or having Gestational high blood pressure patients were called for more frequent antenatal follow-up visit where fetal growth monitoring and their vigorous investigations were performed (urine Dr, blood urea, creatinine uric acid, blood CP and ultrasound). Of these 180 patients, 42 were hospitalized for control of PIH because their condition deteriorated and they did not respond to consecutive management by antihypertensive therapy. 5 patients developed eclamptic fits making a percentage of 2.70. The real percentage of eclampsia in the general population of Lahore is much higher because of lack of antenatal care.

Table 1: Incidence of Gestational hypertension in different Groups.

Groups	=n	%age
Patients having PIH	180(500)	36
Primigravida	132.5(180)	73.61
Multigravida	52.5(180)	29.16
Multiple Pregnancy	10(180)	5.55
Elderly women	42.5	23.61

Table 2: Pregnancy outcome of the PIH

Complications of PIH	=n	%age
Patients having PIH	180(500)	36
Patients hospitalized for the treatment of PIH	41.5(180)	23.05
Eclampsia	5(180)	2.77
Patients showing signs of IUGR	15(180)	8.33
IUD	4(180)	2.22
Mode of delivery (by induction or Caesarean)	15(180)	8.33
Neonatal death	2(180)	1.11

DISCUSSION

Our study showed much reduced rate because only booked antenatal patients were selected for study. Patients with PIH were monitored very carefully and were promptly hospitalized for treatment whenever needed. Therefore incidence of eclampsia developing as a result of PIH is much less in this study group. Of 42 patients hospitalized for management of PIH 15 patient showed signs of IUGR, which makes 8.3% out of 180. 4 patients out of 42 developed intrauterine death, which makes the percentage of IUD out of 180 patients as 2.17%. In 15 patients who make 8.33%, pregnancies were terminated by caesarian section or by induction due to fetuses showing signs of IUGR. 2 babies had neonatal death, which makes the percentage as 1.1% out of 180. The incidence is influenced by parity being more (70%) in primigravidae^{13,14,15}. Racial factors, probably by genetic predisposition and environmental influences may play some role. McDonald^{12,15,16} found PIH to be 18% in white, 20% in Hispanic and 22% black population, respectively

CONCLUSION

The incidence of Gestational hypertension in developing countries and the highly industrialized world is similar but incidence of severity is higher in developing countries especially among Primigravida due to poor antenatal care and lack of education and therefore provision of good quality antenatal care and good control of blood pressure during pregnancy are the need. Similarly developing public awareness for early treatment from hospital by media campaign will be helpful in reducing the incidence. Therefore it is recommended that all the pregnant female should have the proper antenatal care, which will not only save the life of baby as well as mother but will also be beneficial for the development of a good healthy nation.

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