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Original Research

Retrospective assessment of cases of Pregnancy Induced Hypertension

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ABSTRACT:
Background: Pregnancy induced hypertension (PIH) is hypertension that occurs after 20 weeks of gestation in women with previously normal blood pressure. The three primary characteristics of pregnancy induced hypertension conditions are high blood pressure, protein in the urine and pathologic edema. Hence; the present study was undertaken for retrospectively assessing cases of pregnancy induced hypertension. **Materials & methods:** Enrolment of data records of a total of 763 pregnancy subjects was included in the present study. Complete demographic and clinical details of all the subjects were recorded. Clinical examination details were recorded for all the subjects. Based on blood pressure values, presence of PIH was segregated. Assessment of profile of patients with PIH was done. **Results:** PIH was found to be present in 71 subjects (9.3 percent prevalence). Mean of the subjects with PIH was found to be 24.1 years. Parity was one to three in 60.56 percent of the subjects. Gestational age was between 37 to 42 in 71.83 percent of the subjects. 52.11 percent of the subjects with PIH were associated with presence of psychological stress. **Conclusion:** Approximately nine percent of the subjects had pregnancy induced hypertension. Inadequate knowledge of management of PIH is a danger to the proper management of PIH.
Key words: Pregnancy, Hypertension, Premature.

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INTRODUCTION

Pregnancy induced hypertension (PIH) is hypertension that occurs after 20 weeks of gestation in women with previously normal blood pressure. The broad classification of pregnancy-induced hypertension during pregnancy is gestational hypertension, pre-eclampsia and eclampsia. Severe preeclampsia in pregnancy is a systolic blood pressure ≥160 mmHg or diastolic blood pressure ≥110 mmHg or both.[1- 3] Eclampsia is a severe type of pregnancy induced hypertension, and it happens in about one in 1,600 pregnancies and develops near the end of pregnancy. The three primary characteristics of pregnancy induced hypertension conditions are high blood pressure, protein in the urine and pathologic edema.[4, 5] PIH is a major pregnancy complication associated with premature delivery, intra-uterine growth retardation (IUGR), abruptio placentae, and intra-uterine death, as well as maternal morbidity and mortality.[6, 7] Hence; the present study was undertaken for retrospectively assessing cases of pregnancy induced hypertension.

METHODOLOGY

The present study was undertaken for retrospectively assessing cases of pregnancy induced hypertension. Enrolment of a total of 763 pregnancy subjects was included in the present study. Complete demographic and clinical details of all the subjects were recorded. Clinical examination details were recorded for all the subjects. Based on blood pressure values, presence of PIH was segregated based on the criteria previously described in the literature.[2- 4] Assessment of profile of patients with PIH was done. All the results were

recorded in Microsoft excel sheet and were analysed by SPSS software.

RESULTS

In the present study, a total of 763 pregnant subjects were enrolled. Among these subjects, PIH was found to be present in 71 subjects (9.3 percent prevalence). Mean of the subjects with PIH was found to be 24.1 years. Majority of the subjects belonged to the age group of 20 to 25 years. 59.15 percent of the subjects had urban residence while the remaining had rural residence. Majority of the subjects (33.8 percent) were illiterate. 40.85 percent of the subjects belonged to service class. 53.52 percent of the subjects were of Multigravida. Parity was one to three in 60.56 percent of the subjects. Gestational age was between 37 to 42 in 71.83 percent of the subjects. 52.11 percent of the subjects with PIH were associated with presence of psychological stress.

DISCUSSION

Pregnancy induced hypertension (PIH) is defined as BP ≥ 140/90 mmHg, taken after a period of rest on two occasions or ≥160/110 mmHg on one occasion in a previously normotensive woman. Globally, pregnancy-induced hypertension is a significant public health threat both in developed and developing countries contributing to high maternal and perinatal morbidity and mortality. According to World Health Organization (WHO) systematic analysis, hypertensive disorders of pregnancy attributed to 14% of maternal mortality and it is the second leading cause of maternal death after hemorrhage in sub-Saharan Africa which accounts for 16.0% of maternal mortality. Similarly, WHO review identified hypertensive disorders of pregnancy were annually responsible for about 25,000 maternal deaths in Africa, 22,000 maternal deaths in Asia, 3,800 maternal deaths in Latin America and the Caribbean and 150 maternal deaths in industrialized countries.[6- 9] Hence; the present study was undertaken for retrospectively assessing cases of pregnancy induced hypertension.

Table 1: Prevalence of PIH

Parameter	Number of subjects	Percentage of subjects (Prevalence)
Total subjects	763	100
Pregnancy induced hypertension	71	9.3

Table 2: Demographic data

Parameter		Number of subjects	Percentage
Age (years)	Less than 20	8	11.27
	20 to 25	19	26.76
	26 to 30	15	21.13
	31 to 35	17	23.94
	More than 35	12	16.90
Residence	Rural	29	40.85
	Urban	42	59.15
Educational qualification	Illiterate	24	33.80
	Upto secondary	21	29.58
	Graduate	19	26.76
	Post-graduate	7	9.86
Occupation	Housewife	27	38.03
	Businesswomen	15	21.13
	Service	29	40.85

Table 3: Clinical data

Parameter		Number of subjects	Percentage
Gravid	Primi	33	46.48
	Multi	38	53.52
Parity	Zero	15	21.13
	One to three	43	60.56
	Four or more	23	32.39
Gestational age (months)	Less than 37	11	15.49
	37 to 42	51	71.83
	More than 48	9	12.68
Psychological stress associated with pregnancy	Present	37	52.11
	Absent	34	47.89

In the present study, a total of 763 pregnant subjects were enrolled. Among these subjects, PIH was found to be present in 71 subjects (9.3 percent prevalence). Mean of the subjects with PIH was found to be 24.1 years. The prevalence of pregnancy induced hypertension among women attending delivery service in the study conducted by Gudeta TA et al was 33. If appropriate preventive measures are not taken for the risk of pregnant women, in long term, it might be the first cause of maternal mortality. The prevalence of PIH in this study is similar with the study conducted in India which was 7.8 %. However, it is slightly lower than the findings of studies done in Iran 9.8%.[10- 12]

In the present study, majority of the subjects belonged to the age group of 20 to 25 years. 59.15 percent of the subjects had urban residence while the remaining had rural residence. Majority of the subjects (33.8 percent) were illiterate. 40.85 percent of the subjects belonged to service class. 53.52 percent of the subjects were of Multigravida. Muti M et al determined the prevalence of PIH and pregnancy outcomes among women with PIH. Interviewer administered questionnaires were used to capture demographic data, obstetric history and knowledge on PIH management. PIH prevalence was 19.4 %. There was no statistically significant difference in delivery before 37 weeks gestation between women with PIH and those without. 12,5 % of the women delivered by caesarean section. Methyldopa was the drug of choice for management of PIH. Less than half of the health workers had sufficient knowledge on definition or management of PIH. Delay in seeking care and shortage of resources were the major reported challenges in the proper management of PIH. PIH prevalence was high. Women with PIH were at higher risk of adverse pregnancy outcomes than those without.[13]

In the present study, parity was one to three in 60.56 percent of the subjects. Gestational age was between 37 to 42 in 71.83 percent of the subjects. 52.11 percent of the subjects with PIH were associated with presence of psychological stress. Perfetto CSR identified the prevalence of pregnancy-induced hypertension and to verify diastolic blood pressure (DBP) association with type of birth and perinatal outcome. During hospitalization, 62.1% had systolic blood pressure > 160 mmHg and 49.6% had a DBP < 110 mmHg. There was no significant association of DBP (p=0.799). The frequency of caesarean section was 64.5%, 28.9% for normal birth, and 6.6% for forceps; 93.4% were live born, 81.0% weighed > 2,500 g, 10.6% were premature, 68.1% were born with adequate gestational age, 84.0% and 99.2% had APGAR score > 7 at 1st and 5th minutes, respectively. The DBP e" 110 mmHg was associated with low birth weight (p=0.002) and prematurity.[14]

CONCLUSION

From the above results, the authors concluded that approximately nine percent of the subjects had pregnancy induced hypertension. Inadequate knowledge of management of PIH is a danger to the proper management of PIH.

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