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Original Research Article

Prevalence of Pregnancy Induced Hypertension in Women Attending Antenatal Clinic in a Tertiary Care Hospital in Maharashtra

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Abstract

Background- Blood pressure (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 is labeled as pregnancy-induced hypertension. [1,2] Pregnancy-induced hypertension (PIH) is a pregnancy-specific condition that includes gestational hypertension, pre-eclampsia (PE), and eclampsia (E). It is linked to intrauterine death, abruptio placentae, maternal mortality, and intrauterine growth retardation (IUGR) [3, 4]. ***Aim*** **-** to find the prevalence of pregnancy induced hypertension in women attending antenatal clinic in a tertiary care hospital. ***Materials and methods-*** Total 200 pregnant women with a gestational age of 20 weeks or greater visiting ANC clinic were included in the study during the period of 5 months (December 2023 to April 2024) at VVP rural hospital, Loni. Demographic details and blood pressure were collected. Data collected was analyzed using Microsoft Excel 2013 and pspp version 1.0.1. ***Results-*** Mean age of participant mothers was 23.2 years. Out of total 200 participants, 15 (7.5%) women presented with PIH (8, gestational hypertension and 5, pre-eclampsia and 2, eclampsia). Mean age of pregnant women presenting with PIH was 29 years as compared to the mean age of pregnant women without PIH which was 22 years. Out of 15 participants with PIH, 10 were primigravida, 8 and 3 were from lower and lower middle class respectively. ***Conclusion-*** PIH is still important problem and health education and awareness is still needed especially in rural communities.

Keyword – Pregnancy induced hypertension, associated factors.

INTRODUCTION

Pregnancy induced hypertension (PIH), a condition specific to pregnancy, includes gestational hypertension, pre-eclampsia (PE) and eclampsia (E), which is associated with maternal mortality, premature delivery, intra-uterine growth retardation (IUGR), abruptio placentae and intra-uterine death [3,4]. In developed as well as developing nations, PIH continues to pose a serious threat to public health and is a major cause of morbidity and mortality among mothers and newborns. Further, studies have shown that a woman's lifetime risk of dying from pregnancy-induced complications in developing countries is 14 times higher than in developed countries [5]. According to an estimate pregnancy induced hypertension affects about 5 - 8% of all pregnant women worldwide and pre-eclampsia occurs in 10% of all pregnancies, the second leading cause of direct maternal and fetal deaths [6]. But Asian women with preeclampsia have been observed with worse pregnancy outcomes than others [7]. No screening test is helpful but presence of high risk factors may help to identify individual. There are no longer any real differences in management between pre-eclampsia and gestational hypertension, in terms of BP management and in the decision to deliver. Gestational hypertension may go to proteinuric phase and may evolve to pre-eclampsia [8].

Given this background, the present study aims to assess the prevalence of pregnancy induced hypertension among pregnant women attending antenatal care clinic.

MATERIALS AND METHODS

Considering prevalence of 11% in a previous study [9], sample size was calculated to be 200. The pregnant women with a gestational age of 20 weeks or greater were included in the study. Pregnant women's

gestational age was measured based on women recall of the last menstrual period (LMP). Exclusion criteria were: women with multiple pregnancies, women with proteinuria at less than 20 weeks' gestation and with chronic hypertension. The demographic data, gravidity and blood pressure were collected. PIH was defined as those pregnant women with hypertension [systolic blood pressure (SBP) ≥140 mmHg and/or diastolic blood pressure (DBP) ≥90 mmHg] at or after 20 weeks gestation with- out proteinuria, where as pre-eclampsia is defined as the presence of proteinuria along with symptoms of PIH. Eclampsis is when a woman with preeclampsia experiences a new onset of generalized tonic-clonic seizures and/or an inexplicable coma during pregnancy or after giving birth. Women with a protein level of 1+ are considered to have proteinuria. pspp version 1.0.1 and Microsoft Excel 2013 were used for the analysis of the gathered data.

RESULTS

Table No. 1: Distribution of socio demographic variables among participants(n=200)

Sociodemographic variable	Frequency (n=200)	Percentage
Religion		
Hindu	159	79.5
Muslim	26	13
others	15	7.5
Education		
Primary	9	4.5
Secondary	103	51.5
Graduate	77	38.5
Post-graduate	11	5.5
Occupation		
Housewives	159	79.5
Skilled workers	33	16.5
Semi-professional	8	4
Socioeconomic class		
Upper class	12	6
Upper middle	34	17
Middle class	71	35.5
Lower middle class	75	37.5
Lower class	8	4
Total	**200**	**100%**

Majority of the participants, i.e 159 were Hindu, 26 participants were Muslim and 15 were of other religions (Buddhist, Jain, Christian). Out of 200, majority i.e 103 were educated till secondary level, 9 have completed primary education, 77 have completed graduation, 11 have completed post-graduation. Majority i.e 159 participants are housewives, 33 are semi-skilled workers, 8 are involved in semi-professional occupation.

Prevalence of PIH in participants

Out of 200 participants, **15 presented with PIH**. (7.5%). Their distribution is shown in figure no.1

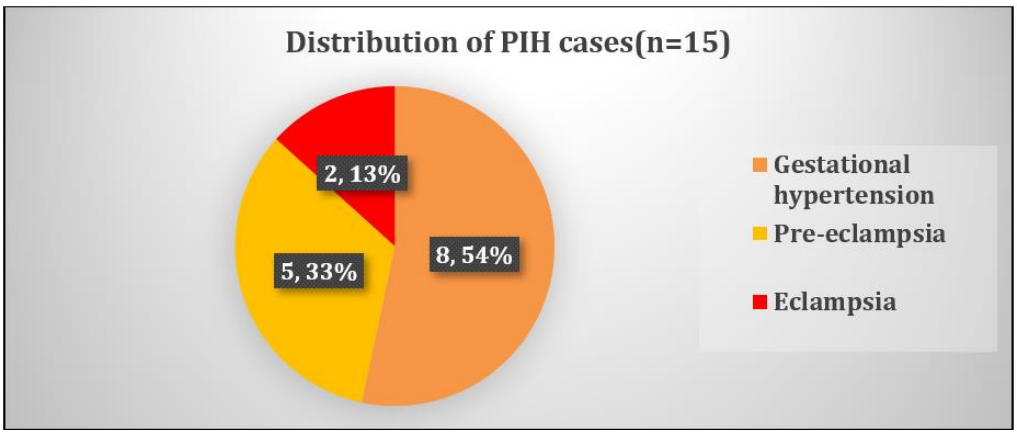

Figure No.1 – Distribution of PIH cases

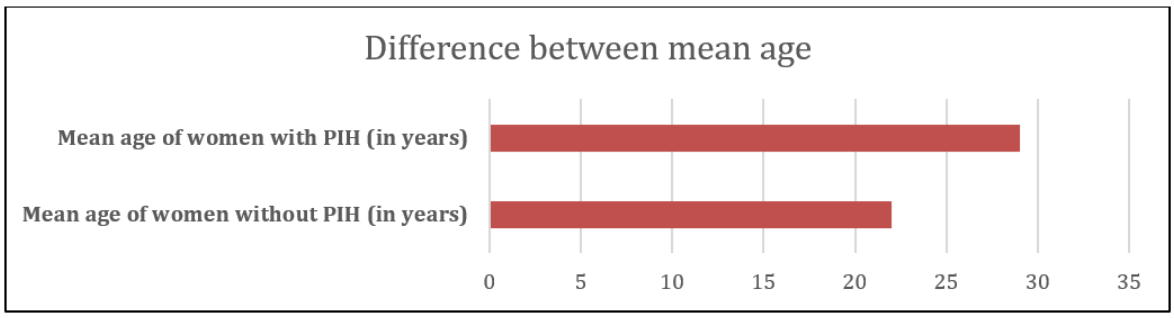

Figure No.2– Difference between mean age

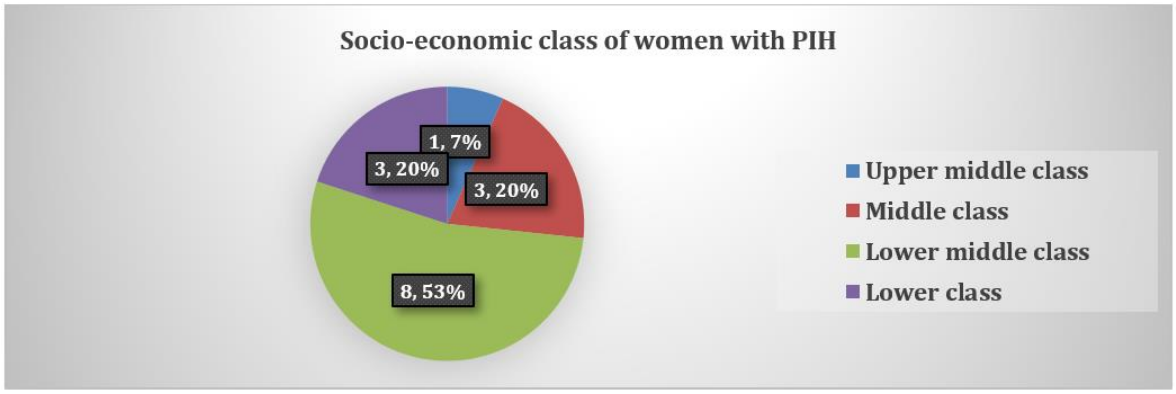

Figure No.3 – Socioeconomic classes of PIH cases

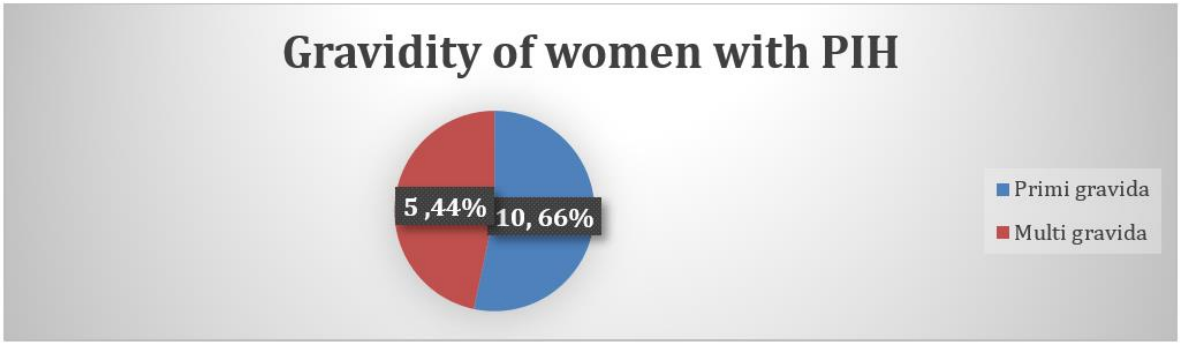

Figure No.4 – Gravidity of PIH cases

DISCUSSION

In current study, the prevalence of Pregnancy induced hypertension was found to be 7.5%. The mean age of the women with PIH was 29 years as compared to mean age of women without PIH being 22 years. In a similar study done by Madhusmita Bal *et al.*, [10] in, prevalence of PIH was found to be 6.2%.

The prevalence of pregnancy induced hypertension was 7.9% in a study done in Ethiopia [11].

In our study, mean age of women with PIH was 29 years as compared to 22 years in those without PIH. In similar study done in Srinagar, India, older women were more at risk of having PIH in pregnancy [12].

In our study, 8 out of 15 i.e 53% women with PIH were primi gravida whereas in a study done by Hema *et al.*, in Telangana, 65% of women with PIH were primi gravida [13].

In our study majority of women with PIH belonged to lower middle class. In a study done by Naseer S *et al.*, [14], 70% of women with PIH belonged to lower class.

CONCLUSION

In our study, older women, women from lower socioeconomic class, primigravida were found more likely to have PIH. There is need for more research in our hospital about PIH. There is need of health awareness and education about PIH.

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