

Original Article

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## Knowledge and Prevalence of Hypertension among Pregnant Women attending in People's Hospital, Chattogram

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### Abstract:

**Introduction:** Hypertensive disorders in pregnancy is one of the major causes of maternal and neonatal morbidity, mortality, premature birth, intrauterine growth retardation (IUGR), and low birth weight and solely maternal mortality is account for 10-15% of maternal deaths in developing countries. This study aimed to find prevalence of pregnancy induced hypertension among pregnant women in People's Hospital Chattogram.

**Methods:** A descriptive cross-sectional study was conducted in Peoples's Hospital for six months from July 2023 to December 2023. A semi structured questionnaire was used to capture demographic data, obstetric history and on PIH status. 100 pregnant women who fulfilled the inclusion criteria were selected by convenience sampling technique. Face to face interview was done to collect socio-demographic and obstetric data. Statistical Package for Social Sciences version 20 was used for data analysis.

**Results:** Majority (65%) of the women ranges from 18-25 years of age. The prevalence of Pregnancy Induced Hypertension (PIH) was found 7%. 38% of them passed SSC, 63% were housewives, 37% came from middle class, 45% from nuclear family. History of hypertension, LUCS, abortion and stillbirth were found 5 (5%), 15(15%), 7 (7%) and 7(7%) respectively. 7% of the women under study were found to hypertensive who had anemia, oedema, oliguria, vertigo and insomnia.

**Conclusion:** The prevalence of hypertension is 7% which is most usual. Worldwide the ranges vary from 5-8%. The study reveals that among the patients with PIH- most are Primi. Age varies from 18-25 years. They are of low socio economic status and poorly educated.

**Key words:** Abortion, Pregnancy Induced Hypertension, Still birth

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### Introduction:

Hypertension during pregnancy is a clinical condition which is associated to group of conditions associated with raised blood pressure during pregnancy<sup>1</sup>.

Pregnancy induced hypertension (PIH) is termed as diastolic blood pressure above 90 mmHg and systolic blood pressure above 140 mmHg. PIH leads to serious complications like eclampsia and pre eclampsia. PIH causes serious consequences like maternal and neonatal mortality, morbidity, premature birth, intrauterine death, low birth weight baby<sup>2</sup>. It is a leading cause of maternal and perinatal mortality and can also lead to longterm health problems like chronic hypertension, kidney failure, or nervous system<sup>3</sup>. Maternal death due to PIH accounts for 10-15% deaths in developing countries<sup>4</sup>. Multiparous women with history of eclampsia are at a greater risk than nulliparous women<sup>5</sup>. In 2013, the incidence of PIH is estimated about 20.7 millions and worldwide 10% of the pregnancy related complications arise from PIH<sup>1</sup>. About 8% to 13% pregnancies in USA are complicated by gestational hypertension<sup>2</sup>. Every year around 2.9 million neonatal death occur due to PIH. An estimated 2.6 million babies are stillborn as a result of

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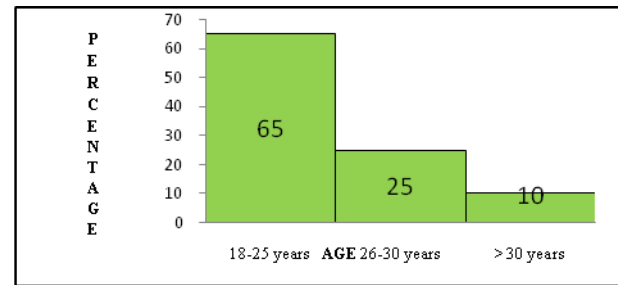
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PIH. In China the rate of still birth is 8.4 per 1000 live births in normotensive women and 21.9 per 1000 births in case of pregnancy in hypertension as per report of WHO 2018<sup>6</sup>. The chance of hypertensive disorder in pregnancy is seen to be closely associated with increasing incidence of preeclampsia, GDM and obesity<sup>7</sup>. Previous history of miscarriage likely to progress the incidence of gestational hypertension into preeclampsia<sup>8</sup>. By 2030, Bangladesh is committed to end preventable maternal and child death. This commitment is necessary to achieve Universal Health Coverage (UHC) in alignment with SDG (Sustainable Development Goal). Bangladesh need to reduce maternal mortality rate from 170.1 per 1000 live births to 59 per 1000 live births to achieve SDG goal 3.1<sup>3,9</sup>. However, the prevalence of hypertensive disorder during pregnancy is not well documented in Bangladesh. Evidence on case fatality rates of eclampsia is very limited and maternal deaths due to hypertensive disorders in pregnancy are estimated using a proportional mortality model. The objectives of the study is to estimate the prevalence of pregnancy induced hypertension during pregnancy in Bangladesh.

**Material and Methods:**

A descriptive cross sectional study was done from July 2023 to December 2023 to see the knowledge and prevalence of hypertension among pregnant women. 100 pregnant women with 20 weeks and above weeks of gestation who came to People's Hospital Outdoor for ANC check up and who got admitted in indoor for delivery are included in the study. A semi structured questionnaire was used to collect the data by face to face interview. Convenience sampling of non probability type was done to enroll the study subjects. Pregnant women with psychiatric problems were excluded from the study. Study subjects with systolic pressure above 140 mmHg and diastolic pressure above 90 mmHg were enrolled for data collection. Data analysis was done by SPSS version 23.

**Result:**



**Figure 1 showing age of the respondents.**

The study shows that majority 65% belonged to age group 18-25 years

**Table-I: Socio demographic profile (n=100)**

Variable	Frequency (n=100)	Percentage (%)	
Educational status	Graduate and above	15	15
	HSC	25	25
	SSC	38	38
	<SSC	22	22
Occupation	Housewives	63	63
	Service Holders	21	21
	Businessmen	16	16
Socioeconomic Status	Lower middle class	49	49
	Middle class	37	37
	Upper class	14	14
Family types	Joint family	29	29
	Nuclear family	45	45
	Extended family	26	26

The above study shows that majority 65% belonged to age group 18-25 years, 38% passed SSC, 63% are housewives, 45% came from nuclear family and 49% belonged to upper class.

**Table-II: Distribution of obstetrical history related data (N=100)**

Characteristics	Characteristics	
	Frequency (n=100)	Percentage (%)
<b>Gravida</b>		
Primi	40	40
Gravida 2	50	50
Gravida 3 and above	10	10
<b>Previous history of hypertension</b>		
Yes	5	5
No	95	95
<b>History of previous Caesarean Section</b>		
Yes	15	15
No	85	85
<b>Previous history of abortion</b>		
Yes	7	7
No	93	93
<b>History of still birth</b>		
Yes	7	7
No	93	93
<b>Pregnancy induced hypertension</b>		
Yes	7	7
No	93	93

The above table shows that only 5% of the pregnant mothers had hypertension prior to pregnancy whereas only 7% have pregnancy induced hypertension. 15% had history of caesarean section, 7% had history of abortion and 7% had history of still birth.

**Table- III: Knowledge about PIH (N=144)**

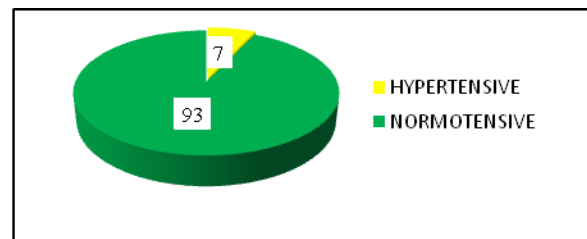
Question	Frequency (n=100)	Percentage (%)
<b>Ever heard about PIH</b>		
Yes	95	95
No	5	5
<b>Know any symptoms of PIH</b>		
Yes	81	81
No	19	19
<b>Knowledge about complications of PIH</b>		
Yes	35	35
No	65	65
<b>Knowledge about PIH treatment</b>		
Yes	12	12
No	88	88
<b>PIH can be treated</b>		
Yes	90	90
No	10	10
<b>Regular exercise can prevent PIH</b>		
Yes	35	35
No	65	65
<b>Loosing excess body weight before conception can prevent PIH</b>		
Yes	7	7
No	93	93

The study shows that 95% of respondents heard about PIH, 81% knew about symptoms of PIH, 35% had knowledge about PIH treatment, 90% believed that PIH can be treated and 7% believed that losing excess weight can prevent PIH.

**Table-IV: Presence of clinical signs and symptoms. (N=144)**

Symptoms of PIH	Frequency (n=100)	Percentage (%)
<b>Anemia</b>		
Present	34	34
Absent	66	66
<b>Oedema</b>		
Present	8	8
Absent	92	92
<b>Vertigo</b>		
Present	15	15
Absent	85	85
<b>Sudden weight gain</b>		
Present	27	27
Absent	73	73
<b>Insomnia</b>		
Present	17	17
Absent	83	83
<b>Oliguria</b>		
Present	8	8
Absent	92	92

The above study reveals that 34% of respondents had anemia, 8% had oedema, 15% experienced sudden weight gain, 17% had insomnia and 8% had oliguria.



**Figure 2 : showing prevalence of hypertension.**

The above study reveals that 7% of the respondents had PIH.

### Discussion:

This study was done to see the prevalence and knowledge about hypertension among pregnant women. In this study it was seen that majority (65%) of the respondents belongs to age group 18 to 25 years and 10% are aged above 30 years whereas in another study majority (57%) of the respondents were aged between 18 to 25 years and 15% were aged between 31 to 36 years<sup>10</sup>. Regarding educational qualification it was observed that 15% are graduate, 38% passed SSC and 25% passed HSC, meanwhile in another study 12% of the respondents were illiterate<sup>11</sup>. In this study it was seen that 63% respondents were housewives, which is almost same as another similar study<sup>11</sup>. In the current study it was found that only 7% of the respondents had PIH and 5% had previous history of hypertension. In the current study it was observed that hypertension was related largely to PIH in pregnant women. Moreover there is strong association between the development of PIH and previous history of hypertension. Yet in a previous study the prevalence of PIH is 8.75% among the pregnant women<sup>11</sup>. In the present study it is seen that 7% of the respondents had previous history of abortion whereas in another similar study 26% had abortion history previously<sup>10</sup>. In this current study it was observed that history of HTN, abortion, still birth and caesarean section are closely related to PIH among the pregnant women. This findings coincides with a similar study in India<sup>12</sup>. In this study it was observed that 34% suffered from anemia, 8% had oedema, 15% had vertigo, 27% gained weight, 17% had insomnia and 8% had oliguria<sup>12</sup>. While in a similar study done in Dhaka city it was seen that 59.7% had oedema, 6.9% had proteinuria and 27.8% had experienced convulsion<sup>12</sup>. When asked about knowledge related to PIH 95% said they heard about PIH, 81% knew about symptoms of PIH, 12% knew about treatment of PIH, 90% believed that PIH can be treated, 35% believed that regular exercise can prevent PIH and 7% believed that excess weight loss before pregnancy can reduce the chance of PIH. This findings is similar to another study done in Bogura<sup>11</sup>.

**Conclusion:** In this study it is observed that majority pregnant women belonged to age group 18-25 years, linked with hypertension. All pregnant women should be appropriately trained, appropriate technologies should be used to recognize risk factors, and appropriate antenatal treatment and care should be given for them during childbirth. Sensitizing and emphasizing the risk factors within the population on health issues is an important step in controlling hypertensive disease during pregnancy. Women are not getting proper formal education and diagnostic or health care facilities. Lacking of knowledge and awareness about PIH along with unavailable diagnostic and treatment facilities are the major reason for PIH-related death. This is high time to turn the table by frequently organizing educational programs on PIH awareness throughout the country.

**Disclosure:** All authors declared no competing interest.

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