

KNOWLEDGE, ATTITUDE, AND PRACTICES REGARDING TO RISK FACTORS OF PREGNANCY INDEUCED HYPERTENSION AMONG PREGNANT WOMEN

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ABSTRACT

INTRODUCTION: Hypertension control among pregnant mothers with pregnancy induced hypertension (PIH) appears difficult to achieve. Part of the reason for poor control of hypertension in these women might be limited PIH self care knowledge. The purpose of this study was to examine the relationship between PIH self care knowledge and hypertension control among pregnant women. Hypertensive disorders are one of a major cause of maternal mortality and morbidity especially in developing countries. This cross sectional descriptive study was carried out to determine frequency of hypertensive disorders of pregnancy and its impact on maternal and perinatal outcome.

METHODOLOGY: A descriptive correlation study design was used. A simple random sample of 100 participants was recruited and data collected using a mercury sphygmomanometer and stethoscope for the blood pressure levels and face to face interviews for sample demographics and PIH self care knowledge. Records of 100 pregnant hypertensive ladies presenting at Husain abad community of Lahore from 4 months from September 2017 to December 2017. was reviewed for demographic profile, mode of delivery, maternal and perinatal outcome. Statistical analysis was performed by SPSS-21.

RESULTS: Total deliveries during study period were 2702. Out of 2702 deliveries 150 (5.5%) mothers were

hypertensive. Out of 150 hypertensive cases 30% were cases of gestational hypertension, 58% were cases of toxemia of pregnancy and 12% were cases of chronic hypertension. Maternal age, gravida, parity was lowest in toxemia of pregnancy group. Commonest maternal complication was eclampsia (32%). There were 6 (4%) maternal deaths. Caesarean section was mode of delivery in 54% cases.

CONCLUSION: Hypertensive disorders of pregnancy are an important cause of maternal and perinatal mortality and morbidity. Concrete steps should be taken so as to diagnose and manage hypertensive disorders during pregnancy to avoid the lethal morbidities. Hypertensive disorders of pregnancy are an important cause of maternal and perinatal mortality and morbidity.

KEY WORDS: pregnancy induced hypertension, pregnant women, knowledge ,attitude and practice

INTRODUCTION

Pregnancy induced hypertension is defined as a condition of high blood pressure during pregnancy. Pregnancy induced hypertension (PIH), also known as toxemia or gestational hypertension is a form of high blood pressure in pregnancy and it is one of the major causes of mortality and morbidity in pregnant women in rural area. Although the cause of Pregnancy induced hypertension(PIH) is unknown (WHO,2014).

The factors of Pregnancy induced hypertension are known to increase the risk of, such risk factors include that mostly affects young women with a first pregnancy, pregnant women younger than 20 years and those older than 40 years, women pregnant diabetics, pregnant women with preexisting hypertension. However, for rural area, it is disturbing to note that maternal mortality studies carried out in the rural areas of Lahore and that PIH is one of the most common causes of death in both child and maternal (Pswary I,2016).

A normal blood pressure is usually is 120/80mmHg in daily routine as well as in pregnancy A high blood pressure above 140/90mmHg during pregnancy. Blood pressure level is more effectively controlled through enhancing the pregnant mothers' self care knowledge. However, most pregnant women have PIH inadequate knowledge to look after themselves during pregnancy in order to control the blood pressure level.(WHO,2015).

In pregnancy the high salt diet may also cause pregnancy induced hypertension in pregnant women. we determine the influence of high salt diet during pregnancy has bad effect on fetal origion.the intake of sail and its products also cause hypertension. High salt diet during pregnancy on the development of heart is harmful for the women and fetus(J,Hypertens.2016).

According to National Heart ,Lungs ,and Blood Institute(NHLBI)there are several possible causes of high blood pressure during pregnancy as over weight or obese failing to stay active, smoking, drinking alcohol ,first time pregnancy, family history of hypertension in pregnancy, carry more than one child, age(above 40).a unhealthy life style may lead to high blood pressure in pregnancy. Women who had high blood pressure before pregnancy are at high risk for related complication during pregnancy than those with normal blood pressure.(NHLBI 2013).

SIGNIFICANCE OF STUDY:

The findings may be used in the provide to create awareness among pregnant induced hypertension patient in rural areas.

JUSTIFICATION OF STUDY:

This study will identifying the gap between knowledge, attitude and practice and risk factors in pregnant non pregnant women towards pregnancy induced hypertension as well as prevention.

LITERATURE REVIEW

Pregnancy induced hypertension and maternal obesity is linked with adverse outcomes for mothers and babies. To get an overview of risks related to obesity which is caused Pregnancy induced hypertension in pregnant women, a systematic review of reviews was conducted. For inclusion,

reviews had to compare pregnant women of healthy weightwith obesity, and measure a health outcome for mother and/or baby. The study is conductive that Maternal obesity is also linked to greater risk of preterm birth, large-for-gestational-age babies, fetal defects, congenital anomalies and prenatal death (Rahman, Alam et al. 2016).

Overweight and obesity are the common causes of the Pregnancy induced hypertension in pregnant women and as well as in reproductive age. obesity increase the mother mortality rate ,miscarriage and also fetal treating condition and also having risk factors as Pregnancy induced hypertension(S.Robison, 2014).

Gestational or pregnancy-induced hypertension (PIH) is the development of new hypertension in a pregnant woman after 20 weeks gestation without the presence of protein in the urine or other signs of preeclampsia. Hypertension is defined as having a blood pressure greater than 140/90 mm Hg(WHO,2015).

Pregnancy-induced hypertension (PIH) is one of the main complications of pregnancy. This condition is characterized by a resting hypertension above 140 over 90 in usually hypertensive women. The complications of PIH during pregnancy can be fatal (eclampsia, kidney failure). Complications for the fetus include premature birth triggered by life-saving treatments for the mother or child and intra-uterine impaired development that can cause fetal death (Zenebe W. et al 2014).

The reported incidence of hypertensive disorders of pregnancy by Zenebe was 5.38% while preeclampsia, eclampsia and HELLP syndrome accounted for 44%, 40% and 7%, respectively. The rate of maternal mortality was 5.55% and perinatal deaths occurred in 37.5% of the deliveries (Zenebe W. et al 2014).

According to a population based study by Zenebe the incidence of hypertensive disorders of pregnancy was 12%. Other hospital based studies showed the pregnancy induced hypertension was the common cause of maternal death which contributed for 20.7% of maternal deaths in the country in South Africa(Zenebe W. et al 2014).

Overweight and obesity are the most common findings in women in reproductive age and during pregnancy as 32% of 35 -64 years old women are overweight and 21% obese. obesity causes major changes in maternal intermediary metabolism. maternal obesity is associated with many risks of the pregnancy as hypertension(S.Robison, 2016).

Studies shows that the incidence of pregnancy disorders like pregnancy induced hypertension is around 5% of which majority were due to severe preeclampsia; according to one

study eclampsia complicates 0.7% of the pregnancies. These disorders are major causes of maternal and perinatal morbidities and mortalities (Zenebe W. et al 2014).

Pregnancy induced hypertension (PIH) is one of the most major causes of both maternal and neonatal morbidity, affecting about 5 – 8 % of pregnant women. It is associated with bad pregnancy outcomes as well as maternal morbidity as well as mortality. Harare City experienced an increase in referrals due to Pregnancy induced hypertension(PIH) to central hospitals from 2009 to 2011. It is a conducted a study to assess the prevalence of Pregnancy induced hypertension and pregnancy outcomes among women with Pregnancy induced hypertension (Petry, Cruzat et al. 2015).

The prevalence of Pregnancy induced hypertension and Diagnosis was made by the American Pregnancy induced hypertension Association criteria (1.50–15.5%), the Australian in Pregnancy Society criteria (20.8%), the hypertension in Pregnancy Study Group India criteria (13.4%), the European Association for the Study of hypertension criteria (1.6%), the International Association of Diabetes and Pregnancy Study Groups criteria (8.9–20.4%), the National Diabetes Data Group criteria (0.56–6.30%) and the World Health Organization criteria (0.4–24.3%). Vietnam, India and Cuba had the highest prevalence of Pregnancy induced hypertension rates(Price, Weitz et al. 2012)

Pregnancy-induced hypertension (PIH) is a highly prevalent pregnancy complication with adverse effects on maternal and infant health. Epidemiologic research concerning its etiology is limited. Birth records from North Carolina for the period 2010 through 2015 included an indication of the presence of (PIH). The risk of PIH was examined in relation to several maternal characteristics and exposures, including reproductive history, demographic characteristics, and tobacco use during pregnancy. Risk ratio estimates, adjusted for confounders, were calculated contrasting among exposed vs unexposed women with Pregnancy induced hypertension(Berger, Guerrieri et al. 2015)

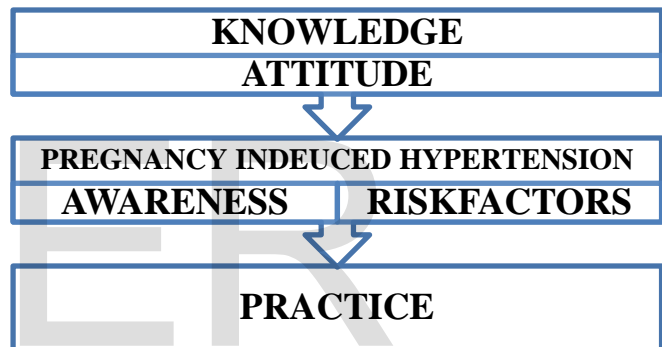
The rate of PIH occurs in about 5% to 8% of all pregnancies and more severe cases are frequently associated with poor fetal and maternal outcomes both in developed and developing countries. This renders PIH a cause for great concern to public health in general and maternal and child health nursing in particular in rural area for example, PIH is responsible for 8 – 10% of women who are at the risk of dying during pregnancy, at child birth or during puerperium; worse figures have been reported in England and Wales

where PIH is responsible for 18.4% of pregnant women's deaths .(de Bettencourt and Curi 2016)

Pregnancy induced hypertension has spoil many lives. The findings from this study would help to find health education strategies on pregnancy induced hypertension in order to reduce the incidence of maternal mortality and morbidity. The strategies would also help midwives to reduce mortality and morbidity. Maternal mortality is now at 750/100000 in Pakistan and PIH is one of the causes of these death (Pswary ,I. 2015).

Theoretical Frame work

Bennett's (1976) knowledge, attitude, skills, and aspirations (KASA) change hierarchy model has been used in evaluating the basic principles for change and will be used in this research.



METHODS

SETTING: The research was conducted in Husain Abad (Lahore).

RESEARCH DESIGN: Cross sectional descriptive study was conducted in community.

POPULATION: Data was collected from married women of Husain Abad.

SAMPLING: Data was collected from convenient selected sample of 133 married women of Husain Abad, Lahore by using a predesigned questionnaire.

RESEARCH INSTRUMENT: Well adopted questionnaire was used with closed ended questions to gather data to answer the research questions.

DATA GATHERING PROCEDURE: Data was collected via door to door visiting.

ANALYZE DATA: Data was analyzed by using the Statistical Package for the social science (SPSS) 21. Descriptive study was done on frequencies, proportion tables, charts, graphs and tables.

ETHICAL CONSIDERATION: Participants were informed about the aim of the study.

RESULTS

This section presents the outcomes of the study. Table 1: Socio demographic characteristic of respondents

Demographic information	Statements	Frequency	Percentage
Gender of participant	Female	133	100%
	21-25	28	21.1
	26-30	45	33.8
	31-35	34	25.6
	36-40	20	15.0
Occupation of participant	Primary	37	27.8
	Middle	31	23.3
Occupation of participant	Housewife	54	40.6
	Employees of private Health worker	55	41.4
	Farmer/worker	14	10.5
	Farmer/worker	10	7.5
Marital status of participant	Married	133	100.0
Number of pregnancies of participant	One time	21	15.8
	Two time	35	26.3
	Three time	49	36.8
	>More than three	28	21.1
Number of children of participant	One	21	15.8
	Two	39	29.3
	Three	47	35.3
	>three	26	19.5

Table 1: Showed the Gender, age, education, occupation, marital status, number of pregnancies, numbers of children of participants.

133 Participants in the study. All married women of rural area. Mostly women (33%) are 26-30 years of age, Education of women is 27.8% who are primary pass, and 24.8% are uneducated. Most women 49(n=133) have three time pregnant. Women who have three children is 47(n=133).

Table2. Knowledge of respondents towards pregnancy induced hypertension

Statements	Yes	No	Don't know
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1	Do you know about pregnancy induced hypertension?	56 28.6%	30	14 7.1%
2	Do you think that stress may cause pregnancy induced hypertension ?	56 28.6%	30 15.3%	14 7.1%
3	High salted diet and high cholesterol are the major factors of cause of pregnancy hypertension?	56 28.6%	30 15.3%	14 7.1%
4	Do you think smoking is also causative factor of pregnancy induced hypertension?	56 28.6%	30 15.3%	14 7.1%
5	Do you know symptoms of pregnancy induced hypertension?	56 28.6%	30 15.3%	14 7.1%
6	Do you think that obesity, cardiac disease and diabetes mellitus are also associated with pregnancy induced hypertension?	56 28.6%	30 15.3%	14 7.1%
7	Do you have any experience of complication of pregnancy induced hypertension?	56 28.6%	30 15.3%	14 7.1%

Table2. Showed the Knowledge of Respondents recording pregnancy induced hypertension .Mostly Women have good knowledge about pregnancy induced hypertension . 28.6% women know about pregnancy induced hypertension , 15.3% women not know about pregnancy induced hypertension and 7.1% Don't know. 28.6% women think that stress may cause pregnancy induced hypertension , 15.3% women do not think that stress may cause pregnancy induced hypertension and 7.1% Don't know. 28.6% women know about High salted diet and high cholesterol are the major factors of cause of pregnancy hypertension, 15.3% women do not know about High salted

diet and high cholesterol are the major factors of cause of pregnancy hypertension and 7.1% women Don't know. 28.6% women think smoking is also causative factor of pregnancy induced hypertension, 15.3% women do not think smoking is also causative factor of pregnancy induced hypertension and 7.1% women Don't know. 28.6% women know symptoms of pregnancy induced hypertension, 15.3% women do not know symptoms of pregnancy induced hypertension and 7.1% women Don't know.

think that obesity, cardiac disease and diabetes mellitus are also associated with pregnancy induced hypertension, 15.3% women do not think that obesity, cardiac disease and diabetes mellitus are also associated with pregnancy induced hypertension and 7.1% women Don't know. 28.6% women know about to have any experience of complication of pregnancy induced hypertension, 15.3% women do not know about to have any experience of complication of pregnancy induced hypertension and 7.1% women Don't know.

Table3. Attitude of respondents towards pregnancy induced hypertension.

Statement	Yes	No	Don't know
1 Do you think (food) fatty food and salty food should be avoided since you have pregnancy induced hypertension (PIH)?	55 41.4%	28 21.1%	17 12.8%
2 Do you think (habits) alcoholism and smoking should be avoided since you have pregnancy induced hypertension (PIH)?	38 28.6%	31 23.3%	25 18.8%
3 Do you think exercise and taking walk is essential to reduce risk factors of pregnancy induced hypertension (PIH)?	42 31.6%	42 31.6%	14 10.5%
4 Stress management is essential for the treatment of pregnancy induced hypertension (PIH)? Like mental and body relaxation?	37 27.8%	43 32.3%	20 15.0%
5 Do you think extra activities (knitting and reading books etc) are the	30 22.6%	44 33.1%	24 18.0%

Statement	Yes	No	Don't know
6 To what extent should you take medicine as prescribed?	47 53.3%	36 27.1%	16 12.0%

Table3. Showed the Attitude of Respondents recording pregnancy induced hypertension. Mostly Women have good attitude towards pregnancy induced hypertension. This table shows that 41.4% women think (food) fatty food and salty food should be avoided since you have pregnancy induced hypertension (PIH) 21.1% women do not think like that and 12.8% women do not know. 28.6% women think (habits) alcoholism and smoking should be avoided since you have pregnancy induced hypertension 23.3% women do not think and 18.8% women do not know. 31.6% you think exercise and taking walk is essential to reduce risk factors of pregnancy induced hypertension, 31.6% women disagree and women do not know. 27.8% Stress management is essential for the treatment of pregnancy induced hypertension, 32.3% do not think like that but 15.0% women do not know. 22.6% Stress management is essential for the treatment of pregnancy induced hypertension, and 33.1% women do not think and 18.8% women do not know. 53.3% extent should you take medicine as prescribed and 27.1% women do not think like that and 12.0% women do not know about that.

Table4. Practice of respondents towards pregnancy induced hypertension.

Statements	Yes	No	Don't know
1 Are you taking exercise in daily routine?	47 35.3%	36 27.1%	16 12.0%
2 Are you taking balance diet with low salt?	47 24.0%	39 19.9%	14 7.1%
3 Do you have monitor fetal movement during pregnancy induced hypertension (PIH)?	48 24.5%	35 17.9%	15 7.1%
4 Do you have sought medical care during pregnancy induced hypertension (PIH)?	54 27.6%	30 15.3%	16 8.2%
5 Do you take drugs as prescribed by physician?	61 31.1%	22 11.2%	15 7.7%
6 Do you have take rest for 2-4 hours per day?	56 28.6%	30 15.3%	14 7.1%

Table 4. Practice of respondents towards pregnancy induced hypertension.

53% women are taking exercise in daily routine. 27.1% women do not taking exercise in daily routine 12.0% women don't know.

24.0% women are taking balance diet with low salt, 19.9% women are taking balance diet with low salt and 7.1% don't know.

24.5% women have monitor fetal movement during pregnancy induced hypertension 17.9% women have not monitor fetal movement during pregnancy induced hypertension and 7.7% don't know.

27.6% women have sought medical care during pregnancy induced hypertension 15.3% women have not sought medical care during pregnancy induced hypertension and 8.2% don't know.

31.1% women take drugs as prescribed by physician 11.2% women do not take drugs as prescribed by physician and 7.7% don't know.

28.6% women have take rest for 2-4 hours per day, 15.3% women do not have take rest for 2-4 hours per day and 7.1% don't know.

DISCUSSION

total of 400 patients were approached and 352(88%) were included as the rest either refused to participate or were unable to recall pertinent information. Mean age of the subjects was 45.4 ± 13.2 years, family history of hypertension was present in 195(55.4%), physical activity >4 times (>30 minutes)/week) was present in 41(11.6%), and the mean BMI was 29.9 ± 6.1 . PIH was present in 66(18.8%).

There were 175(49.7%) cases and 177(50.3%) controls. The mean age of the cases was 53.6 ± 8.65 years and 37.2 ± 11.7 years in the controls. PIH was present in 37(21.2%) cases and 29(16.4%) controls (Aga Khan University Hospital, Karachi, 2012).

Every maternal death is a tragedy for the women and for her family, and a loss to the community and society in which she lives. HDP is the 2nd most common cause of maternal deaths worldwide.¹⁷ In this study frequency of HDP, chronic HTN, gestational HTN, and severe PE and eclampsia is 5.5%, 0.66%, 3.5%, 1.6% and 1.7% respectively. Frequency in 2 local studies is 5.34%, 0.56%, 3.3%, and 1.04% for HDP, chronic HTN, and PE and eclampsia respectively in one study and 8.9%, 1.97% 0.85% for HDP, and PE and eclampsia in 2nd study respectively.^{11,17} Prevalence of HDP varies according to geographic region of the world. It ranges between 1.5% in Sweden to 7.5% in Brazil and India.^{4,18} Prevalence of chronic HTN, PE and eclampsia in Turkey is 0.56%, 4.34% and 0.54%.³ In India prevalence of PE and eclampsia is

3.7% and 0.79%.¹⁸ Difference in rates of HDP could be genetic, diet or management of mild PE. Young, nulliparous, non-booked women are typical demographic characteristics.

Literature also revealed similar demographic data.^{3,11,18,19} Our study is in confirmatory with the view that HDP is essentially a disease of primigravida. HDP are associated with high MM. WHO estimates that at least 1 mother dies every 7 minutes from complications of HDP.¹⁶ It accounts for 16% of maternal deaths in developed countries, 25% in Latin America and 9% in each Africa and Asia.¹⁶ A national survey found eclampsia is 3rd leading cause of maternal deaths, preceded by haemorrhage and sepsis.

20 Even morbidities associated with severe PE and eclampsia may need intensive care or specialist medical facilities or treatment such as ventilator or renal dialysis. Access to these facilities is often limited particularly in primary care units. Early referral to tertiary care centre is mandatory. Frequency of post-partum eclampsia (PPE) is high (14.5%) like one local (21%).

one study from Turkey (11.33%).^{3,11} This high frequency of PPE requires attention that health providers do not only focused on ante and intrapartum cases of eclampsia but also on cases with severe preeclampsia especially within 48 hrs of delivery for prevention of development of PPE. HDP are also associated with high PNM and perinatal morbidity. The cumulative SBR is 141/1000 live births. In one local study SBR is 175/1000 live births.¹¹ PNMR is 295/1000 births while 230/1000 births in one local study.¹⁶ Chronic placental insufficiency is responsible for foetal death, IUGR/ or preterm birth.

Limitations:

Non-probability sampling technique was applied in the study. There might be response bias in the results because of the sensitive topic. The study was conducted in only Government Hospitals.

CONCLUSION

The study concluded that overall level of knowledge among women was satisfactory but there were also some misunderstanding about contraception. The attitude was shown positive and there were satisfactory practices of women regarding contraceptive method/family planning. Being a sixth most populous country of world Pakistan has many problems. Increasing population badly impacts on economic status of country. Less resources and poverty

leads to increase the rate of maternal mortality rate. Thus there is need to improve the knowledge and provide programs to enhance the knowledge of general public about the use of contraceptive methods. Make easy access to received information and facilities about family planning services.

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