

Frequency of Hypertension during Pregnancy

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ABSTRACT

Aim: To determine frequency of hypertension during pregnancy.

Study design: Descriptive Cross Sectional Study.

Place and duration of study: This study was conducted at medical OPD of Sargodha Medical College Hospital, Sargodha from 1st January to 15th February 2016.

Methods: A total of 100 women with pregnancy having gestational age from 20 weeks onwards were included. Gestational age was detected on ultrasound and from last menstrual period. Pregnancy induced hypertension was identified on the basis of clinical examination which was done by measuring blood pressure via well maintained sphygmomanometer. Data was recorded on predesigned proforma, entered and analyzed by using SPSS-22.

Results: Our study revealed that hypertension among pregnant women visiting OPD of this hospital was 56%. Mean age of respondents was ± 30.54 with SD of 3.08. Observing different age groups of the respondents most of them (63.5%) belong to the middle age group i.e. 26-35 years that is the topmost reproductive age.

Conclusion: Pregnancy is related with complex risk of pregnancy induced hypertension. Mothers mostly come across added complications during pregnancy and child birth. Early booking, good care during pregnancy and delivery and proper utilization of contraceptive services can prevent the complications.

Keywords: Complications, Hypertension, Pregnancy.

INTRODUCTION

Pregnancy induced hypertension are the term used to describe the different stages of the same syndrome¹. Pre-eclampsia is as pregnancy induced hypertension accompanied with renal involvement and proteinuria². Eclampsia results from pre-eclampsia that progressed to seizures. Arterial hypertension is a problem in 7 to 10% of pregnancies and is a reason of increased risk of prenatal complications including death of the mother or child³. Among various forms of hypertension in pregnancy pre-eclampsia and eclampsia are responsible for the most of the serious complications of elevated blood pressure⁴.

Hypertensive ailments of pregnancy remain the prominent reason of motherly prenatal sickness and death⁵. American congress of obstetricians and gynecologists defined hypertension in pregnancy as sustained blood pressure of 140mmHg systolic or greater and 90mmHg or more diastolic⁶. The onset of

signs and symptoms of PIH is usually after 20 weeks of gestation. Hypertension in pregnancy is associated with CVS disorders later in life⁷. Blood pressure monitoring in women who have experienced hypertension in pregnancy after purpura has been suggesting the early detection and prevention of various CVS disorders. It may depend on relative hyper androgenic state and further alterations in endothelial function, carbohydrates and lipid metabolism which have been shown in otherwise healthy women with previous history of gestational hypertension⁹. According to National Heart, Lung and Blood Institute there are several possible causes of high blood pressure during pregnancy; including, Overweight or failure to stay active, Smoking, Drinking alcohol, Advanced maternal age during first pregnancy i.e., greater than 35 years, Carrying multiple foetuses¹⁰.

Pathogenesis of pregnancy induced hypertension is dependent upon the interface among the surface endothelium in the utero placental circulation, maternal platelets and opposing actions of eicosanoids produced by these tissues¹¹. Our country comparable with other evolving countries has around 75% people concentrated in countryside parts somewhere there is dearth of rudimentary health services and notion of antenatal nursing is vague¹². The consensus on etiology of pregnancy induced

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hypertension is not exclusively agreed and immunological factors look to trigger the placental diseases where genetic arrangement governs maternal vulnerability¹³. Study conducted in Bangladesh, concluded that pregnancy induced hypertension, leads eclampsia, obstructed labour, postpartum hemorrhage and other childbirth complications¹⁴.

The objective of the study was to determine the frequency of hypertension during pregnancy.

MATERIALS AND METHODS

This cross sectional descriptive study was conducted in medical outpatient department of Sargodha Medical College Hospital, Sargodha, Pakistan. The study was conducted from 1st January to 15th February 2016. All pregnant women were the study population. The study sample was calculated of 100 pregnant women. The sample was determined by using non-probability convenience sampling technique.

Inclusion Criteria: Women with pregnancy having gestational age from 20 weeks onwards, Gestational age diagnosed on ultrasound and from last menstrual period and age from 15 to 40 years.

Exclusion Criteria: H/O Diabetes Mellitus, Rheumatic Fever.

Data Collection Procedure: Data was collected by using self-structured questionnaire comprising of open and closed-ended questions covering all study variables.

Data Analysis: The complete data was entered and analyzed on SPSS version 22. Frequencies and percentages of various characteristics of respondents were determined.

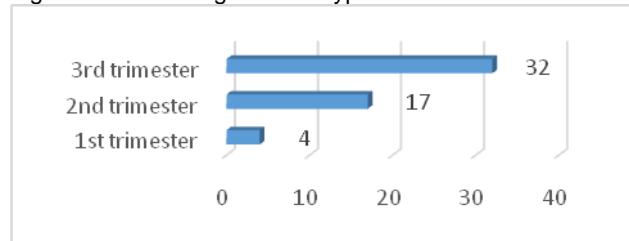
RESULTS

Our study revealed that hypertension among pregnant women visiting OPD of this hospital was 56%. Mean age of respondents was ± 30.54 with SD of 3.08. Looking through different age groups of the respondents most of them (63.5%) belong to the middle age group i.e. 26-35 years, which is the peak reproductive age as well.

Table: Age Groups of the Respondents

Age Groups	Frequency	Percent
15-25 Years	21	21
26-35 Years	72	72
> 35 years	8	8
Total	100	100.0

Figure: Time of Diagnosis of Hypertension



There found to be a significant difference in the time of diagnosis of hypertension at different gestational ages. It is revealed in the above figures that hypertension was diagnosed more in the second and third trimester of pregnancy.

Conflicting to the usual belief that antenatal visits promote the early diagnosis and management of hypertension among pregnant women there found to be no significant difference among two groups ($p=0.210$). Here is an important question that whichever the antenatal facilities are miscarried to identify the hypertension or they are not considering it significant to detect and treat the hypertension or the pregnant women are only visiting to the service provider after getting prompt due to roughly hypertensive symptoms.

DISCUSSION

In present study frequency of pregnancy induced hypertension was observed 56%. Our figures compared with studies as according to one assessment done in Bangladesh, more than 50% mothers suffer from pregnancy induced hypertension, eclampsia, obstructed labour, postpartum hemorrhage and delay in delivery of placenta risking them to face death¹⁴ where apart from other complications PIH found to be of 20%¹⁵ in one intercontinental and it was 18% in a native study¹⁶. Other studies have concluded the frequency of Pregnancy induced hypertension in their studied population of teenage mothers was 30% and 32% respectively^{17,18}.

Same magnitude of disease where only group of 70 mothers were involved surprisingly showed the frequency of hypertensive disorders even up to 37% which is lower from our figures¹⁹.

CONCLUSION

This study concluded that the hypertension in pregnant women is diagnosed late in their gestations which obviously limiting its proper management. More pregnant women who are opting pregnancies after long duration of their marriage are more sufferers of hypertension. Late diagnosis of

hypertension during pregnancy ultimately also compromising the outcome of pregnancies. Primary appointment, virtuous attention during pregnancy and delivery. Efforts must to be focused to stern implementation of rules barring marriage in our country. Admittance to excellence health services that should be confirmed.

Recommendations: Collective consciousness among health care providers and women of reproductive age regarding Hypertension should be piloted. Health education drives should be conducted. Posters, pamphlets, and leaflets should be published and distributed regarding the concept of early diagnosis and management of Hypertension. Nationwide guiding principle on hypertension must be established and executed.

REFERENCES

1. Redman C.W.G (1982).Hypertension in pregnancy oxford textbook of medicine. Volume 1,section 1-12 2nd ed,pp11.4-11.9
2. Won HS ,Kim DY, Yang MS, Lee S J Hyun-hoshin, Prk JB. Pregnancy induced hypertension but not gestational diabetes mellitus for venous thrombus embolism in pregnancy. KoreanCire J 2011;41:23-7
3. Easterling TR, Carr DB, Bratang D, Diederiches C, Schimucker B. Treatment of hypertension in pregnancy: Effect of atenolol on maternal disease, preterm delivery and fetal growth. Obstet Gynecol 2001;98:427-33
4. Sibai BM, Barton JR. Expectant management of severe pre- eclpsia remote from term: patient selection, treatment and delivery indications.AM J obstet and Gynecol 2007;196(6);514,e1-9
5. Mugo M. Govinderjan G, kurukalasuriya LR, Sowers JR, Mcfarlane ST. Hypertension in pregnancy. Currhypertens Rep 2005;7:348-54
6. Health Canada special report on maternal mortality and severe morbidity in Canada-enhanced surveillance: path to prevention 2004,Minister of ublic works and Gout services Canada.
7. Centre of Maternal and child Enquiries (CMACE)Saving Mother's lives reviewing maternal deaths to make motherhood safer:2006-08.The eighth report on confidential enquiries into maternal deaths in UK . BJOG ,volume 118,Issue suppl.1,2011,pp1-203
8. Sibai BM. Hypertension. In Gabbe SG, Niebyl JR, Simpson JL editors. *Obstetrics normal and problems pregnancy* 5thed.Phelidelphia Elsevier Churchill living stones;2007.chap 33.
9. Mugo M. Govinderjan G, kurukalasuriya LR, sowers JR, Mcfarlane ST. Hypertension in pregnancy. Currhypertens Rep 2005;7:348-54
10. Pregnancy Hypertension: an International journal of women's CVS health. April 2014 ,Vol.4(2):105-145,Doi :1016/j, preghy 2014.01.003
11. Incidence of Women Having Pregnancy Induced hypertension. In Karachi, Pak Journal of Pharmacology, Vol.20, No.1,Journal 2003,pp5-8.
12. V.S Visser, W. Henses, Afronx, CmM Koopmans Pregnancy Hypertension. An International journal of women's CVS health,Vol.3(4),242-247.Doi10-1016/j. preghy. 2013.07.002.
13. Naqvi MM, Naseem A. Maternal and fetal risks associated with teenage and adult pregnancy. JRMC 2010;14 (1):40-2.
14. Banerjee B. Teenage pregnancy: a socially inflicted health hazard. Ind J Comm Med 2009;34(3):227-231.
15. Chahande MS, Jadho AR, Wadhva SK, Udhade S. Study of some epidemiological factors in teenage pregnancy hospital based case comparison study. Ind J Comm Med 2002;27:106-9.
16. Shah N, et al Comparison of obstetric outcome among teenage and non-teenage mothers from three tertiary care hospitals of Sindh, Pakistan. J Pak Med Assoc 2011; 61 (10): 963-7.
17. Saxena P, Salhan S, Chattopadhyay B, Kohli M, Nandan D, Adhish SV. Obstetric and perinatal outcome of teenage and older primigravidae- a retrospective analysis. Health and Population: Perspectives and Issues 2010;33(1):16-22.
18. Rudra S, Bal H, Singh S. A retrospective study of teenage pregnancy in a tertiary care hospital. Int J Reprod Contracept Obstet Gynecol 2013; 2(3): 383-87
19. Grover N, Sandhu KK. Teenage Pregnancy: Too Much Too Soon. JSFOG 2009; 1(3):41-3.