

FREQUENCY OF PREGNANCY INDUCED HYPERTENSION IN TEEN AGE MARRIED GIRLS AT PMCH NAWABSHAH

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ABSTRACT

Objectives: To determine the frequency of Pregnancy Induced Hypertension in Teenage married girls at PMCH Hospital Nawabshah.

Method: This cross-sectional study was carried out on 200 pregnant women from Gynecology & Obstetrics Department of Unit-1 and 2 PMC Hospital Nawabshah from January 2018 to December 2018. The sampling technique was convenience sampling. Blood Pressure was taken by sphygmomanometer of mercury type B.P apparatus and interviewed all the study subjects. A well designed and structured questionnaire was used for data collection and analyzed statistically. The data was analyzed statistically by SPSS Version 20.0.

Results: The mean age of married teenage girls was 16.6 Years with SD \pm 2.3 Years. The study results show that 23.5% of Teenage mothers were suffering from Pregnancy Induced Hypertension. 83% women participants were in the age group of 17 to 19 years. Majority 80.3% of marriages were in the age of 13 to 16 years. 76% of women were in 1st and 2nd gravida.

Conclusion: ¼th of Teenage married girls are suffering from Pregnancy Induced Hypertension. The maternal age of 17-19 years has been found most common age group for pregnancy induced hypertension.

Key Words: Pregnancy induced Hypertension, Teenage, Married Girls, and Nawabshah.

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INTRODUCTION

Pregnancy induced hypertension (PIH) is Systolic blood pressure 140 mmHg or above and diastolic blood pressure 90 mmHg or above in the 24th week of gestation.¹

Increase blood pressure in Pregnancy also called Pre-eclampsia is a complicating problem of pregnancy and can be point out by hypertension, (HTN) edema due to fluid retention, and protein urea.²

The high blood pressure in pregnancy is one of the most frequent public health problems worldwide, about 6 to 8% of all pregnancies are complicated by (HTN). 10-15% maternal deaths in developing world and 18% in developed world are due to increase in blood pressure during the pregnancy.³

The teenage pregnancy is considered when a woman becomes pregnant before completing 18 years of age. Amongst 18 to 19 years' teenagers, in United States, the birth rate declined from 60 per 1000 in 2004 to 41 per 1000 in 2014.⁴

The birth rate for Asian teenagers, 15 to 19 years old, dropped from 27 per 1000 women in 2004 to 18 per 1000 women in 20014. Still teenage pregnancy rates remain high. Every year according to the WHO 20 – 24 million adolescents resort to abortion. It is estimated by the WHO that the risk of death in teenage girls 13-19 years is two times greater than the ages of 20 – 24 years. The rate of the maternal mortality is five times greater in between 13 and 14 as compared to the death rate in the age

group of about 20 years.⁵

The etiology of Pregnancy induced hypertension is still unclear; however, the number of theories relating to dietary factor, immune system, the genetics and the maternal vascular system has been together considered in pregnant mothers. Among the pregnant mothers generally there are many risk factors, proven by many studies enhance the risk of PIH include the pre-existing HTN, diseases of kidney, diabetes, HTN with a previous pregnancy, age of mothers less than 20 or more than 40, or triplet pregnancy, nulli-parity, and pre-pregnancy obesity.⁶⁻⁷

The state of affairs in countries of South Asia are uncaring; as there are greater shares of pregnancy in teenage because of the system of marriages in younger age in this region and consequently society expect to have a kid soon after marriage.⁸

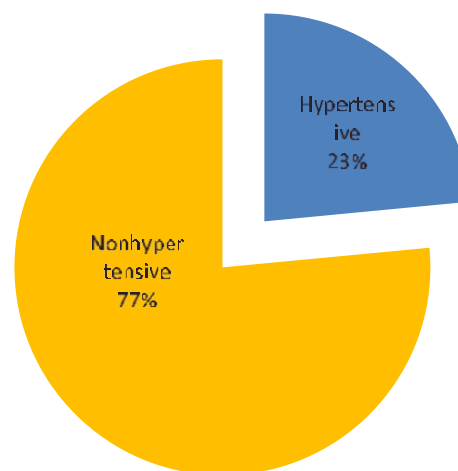
If the PIH is not treated early it can cause seizures and even maternal morbidity and mortality. Due to these risk factors it is necessary to deliver the patient to prevent these complications, before completion of 37 weeks' gestation. The symptoms of HTN vary in each pregnant women which may include proteinuria, oedema, sudden weight gain, changes in vision such as blurred or double vision, nausea, vomiting, pain in the abdomen of the right side or the pain in the stomach, or passing urine in decreased amount, changes in the functions of the liver and the kidney. Diagnosis is based on the hypertension levels, and other symptoms which can help to establish PIH.^{2,9}

The purpose of this study is to observe the frequency of (PIH) in teenage married girls to recognize the burden of this diseases and effective measures which should be taken to decrease in morbidity and mortality in teen age pregnant mothers.

METHODS:

This cross-sectional study was carried out on 200 pregnant women at Indoor and Outdoor Patients from Gynecology & Obstetrics Department of Unit-1 and 2

fig: 1. frequency of HTN



PMC Hospital Nawabshah from January 2018 to December 2018 at Indoor and Outdoor Patients. Sample size is obtained by using standard formula Rao soft calculator considering prevalence 10% confidence interval 95%, margin of error 7%. Inclusion criteria pregnant women of 3rd trimester age up-to 19 years of age. Exclusion criteria pregnant women over 20 years of age, not willing, and known cases of hypertension (by history). Blood Pressure was taken by sphygmomanometer of mercury type B.P apparatus and interviewed all the study subjects. A well designed and structured questionnaire was used for data collection and analyzed statistically. The data was analyzed statistically by SPSS Version 20.0.

RESULTS

A total of two hundred 200 pregnant women in third trimester were included and examined for the pregnancy induced hypertension in Gynecology and Obstetrics department of PMCH Nawabshah.

Frequency of pregnancy induced hypertension in teenage married girls.

Frequency of high blood pressure is 23%, while 77% were normotensive.figure 1

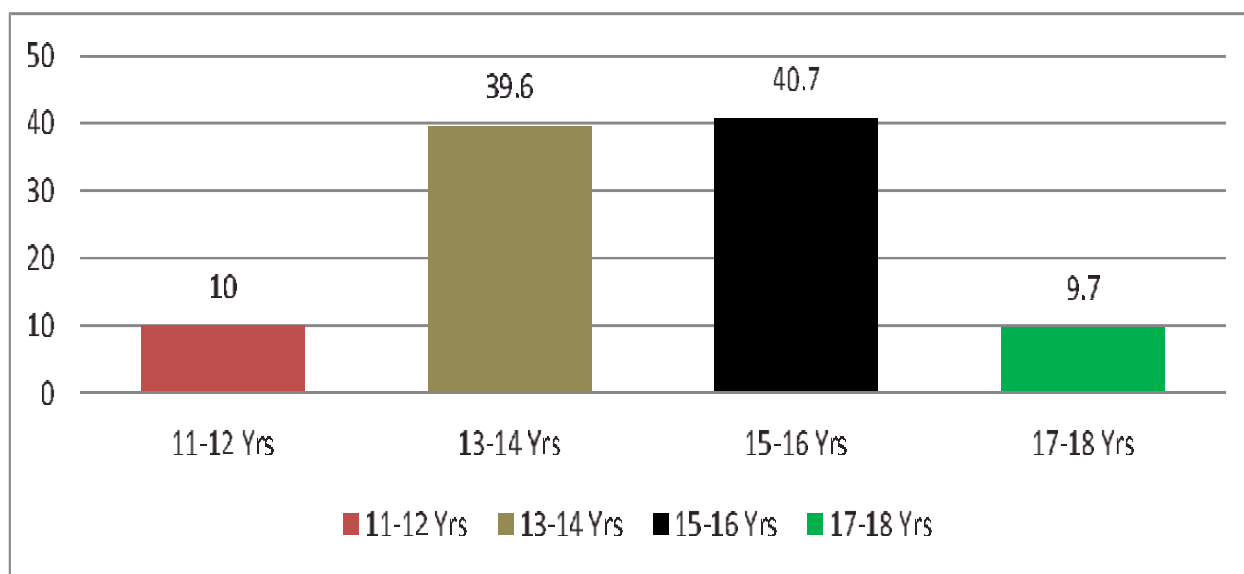
Table 1. AGE IN YEARS:

83% of the pregnant women were in the age group of 17 to 19 years of age while only 3% were in the age group of 13 to 14 years. Table 1

Age	Frequency	Percentage %	Mean Age	Standard Deviation
13-14 Yrs	60	30	16.6 Yrs	± 2.3 Yrs
15-16 Yrs	74	37		
17-18 Yrs	36	18		
19 Yrs	30	15		
	200	100		

Figure 2. AGE AT MARRIAGE

80.3% marriages were in the age of 13 to 16 years figure 2

**Table 3. GRAVIDA, AGE AND PREGNANCY INDUCED HYPERTENSION**

Gravida	13-14 Yrs		15-16 Yrs		17-18 Yrs		19 Yrs		P- Value
	No HTN	HTN	No HTN	HTN	No HTN	HTN	No HTN	HTN	
G1 6	22	12	21	10	18	5	14	4	0.01
G2 27	10	5	16	5	10	1	8	0	
G3 99	8	3	12	2	2	0	4	0	
G4 68			8	0					
Total	40	20	57	17	30	6	26	4	200

DISCUSSION

The study results revealed that the hypertension in teenage pregnancy is 23.5%. The findings about frequency of PIH in present study are similarly reported by the study conducted by Dr. Shahida Sheikh Gynecologist at Sheikh Zaid Women Hospital Chandka Medical College Larkana at the same age group 13 to 19 years shows frequency of 21.47%.¹⁰

Study results proved that the maternal age of 13-16 years has been found (70% of total PIH) to be the significant age group for pregnancy induced hypertension from 17 to 19 years' age group (30%). This could be explained by the research conducted by Muna A B of College of Health Baghdad. The results of her study also revealed that the extreme ages of reproductive years are well known risk factors for hypertension during pregnancy with high incidence rates in teenagers. This study concludes that the factors that might be related to hypertension in pregnancy were early reproductive age, housewives, family history of hypertension and short birth intervals.¹¹

This study results reveal that the age of marriage of group 11 to 16 years is more (64.5% of total PIH) at risk for hypertension than in 17 to 19 years (35.5% of Total PIH). The present results also show that the prim gravida (53%) are more prone to hypertension in comparison to multi gravida (47%) and the pregnant women who are in 9th month are more prone (28.75%) for hypertension than the 7th and 8th month of the pregnancy.

Pierre, et al, 2011 in Cameroon showing similar results with this study finding with different factors associated to hypertensive disorder in pregnancy. They included early teenage, primi gravida and family history of hypertension. At multivariate analysis, the risk of having hypertension during pregnancy remained three times greater for primi gravida having family history of hypertension.¹²

CONCLUSION

¼th of Teenage married girls are suffering from Pregnancy Induced Hypertension. The maternal age of 17-19 years has been found most common age group for pregnancy induced hypertension. Efforts need to be

directed towards strict enforcement of laws prohibiting teenage marriage in Pakistan. Health education and public awareness of the pregnancy induced hypertension and their risk factor by mass media should be promoted, to save the lives of a newborns and mothers.

REFERENCES:

1. World Health Organization. Adolescent pregnancy—unmet needs and undone deeds: a review of the literature and programs. Geneva, Switzerland: WHO Press; 2007.
2. Zibaenezhad MJ, Ghodsi M, Arab P, Gholzom N., "The Prevalence of Hypertensive Disorders of Pregnancy in shiraz, Southern Iran" Iranian Cardiovascular Research Journal, 4(4): 169-172, 2010.
3. Rashid SF. Emerging changes in reproductive behavior among married adolescent girls in an urban slum in Dhaka, Bangladesh. *Reprod Health Matters* 2006; 14(27):151-9.
4. Savitz DA, Danilack VA, Engel SM, Elston B, Lipkind HS. Descriptive epidemiology of chronic hypertension, gestational hypertension, and preeclampsia in New York State, 1995–2004. *Matern Child Health J.* 2014;18(4):829–838.
5. 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.
6. Attahir A, Dikko AAU, Sufiyan MB, Salihu A, Rabi AM. Association between maternal socio-economic status, polygamy and risk of pre-eclampsia in rural areas of Northern Nigeria. *J FamReprod Health.* 2010; 4: 47–52.
7. Kovaivisarach E, Chairaj S, Tosang K, Savapiryanont AS, Chotigeat U. Outcome of teenage pregnancy in Rajavinthi Hospital. *J Med association Thai* 2010;93(1):1-8.
8. Caroline A., Kátia G., Mariana R., Israel R., "Risk factors for hypertensive disorders of pregnancy in Southern Brazil" *Rev Assoc Med Bras,* 2011;57(6): 692-696.
9. Shahida Shaikh. Frequency of Pregnancy Induced Hypertension in Teenage

- Pregnancy. Journal of Medical Forum 2013; 6: 3.
10. Muna A.B.Z. Assessment of risk factors for hypertension in pregnant women case – control study.. AL-Taqani. 3013; 26: 3.
 11. Chang JJ, Strauss JF, 3rd, Deshazo JP, Rigby FB, Chelmow DP, Macones GA. Reassessing the impact of smoking on preeclampsia/eclampsia:are there age and racial differences? PLoS One. 2014;9(10):e106446.
 12. Pierre M., Pascal F., Robinson M., Gisèle F., Paul T., Joseph N., "Risk Factors for Hypertensive Disorders in Pregnancy A Report from the Maroua Regional Hospital, Cameroon" J ReprodInfertil.2011; 12(3): 227-234