

Frequency of Pregnancy Induced Hypertension in Teenage Pregnancy

Shahida Shaikh

Assoc. Prof. Gynae and Obst. Unit-II, Sheikh Zaid Women Hospital Chandka Medical College Larkana

ABSTRACT

Objective: To determine frequency of Pregnancy Induced Hypertension in teenage pregnancy.

Study Design: Descriptive Cross Sectional Study

Place and Duration of Study: This study was conducted at Shaikh Zaid women hospital Chandka Medical College Hospital Larkana from 1st June 2013 to 1st December 2013.

Materials and Methods: A total of 163 women with singleton pregnancy having gestational age from 20 weeks onwards were included in this study. Gestational age was diagnosed on earlier dating ultrasound and from last menstrual period (LMP). Pregnancy induced hypertension was diagnosed on the basis of clinical examination which was done by measuring blood pressure via well maintained sphygmomanometer. Data was recorded on predesigned proforma including age, parity, gestational age and frequency of teenagers with high blood pressure.

Results: Frequency of pregnancy induced hypertension in teenage pregnancy was observed in 21.47% in our study population. The age group of patients affected mostly with pregnancy induced hypertension was 16 to 17 years of age, and their mean age was 16.35 ± 1.68 years while mean gestational age of the patients was 27.04 ± 3.44 weeks. Looking in to parity of patients, 64 (39.26%) women were primigravida, 64 (39.26%) were primipara (having already given birth to one baby) and 35 (21.47%) had Parity of 2.

Conclusion: Teenage pregnancy is associated with higher risk of pregnancy induced hypertension. Teenage mothers generally encounter more problems during pregnancy and child birth than older women. Early booking, good care during pregnancy and delivery and proper utilization of contraceptive services can prevent the complications in this group.

Key Words: Pregnancy induced hypertension, Teenage pregnancy, complications

Citation of article: Shaikh S. Frequency of Pregnancy Induced Hypertension in Teenage Pregnancy. Med Forum 2015;26(1):5-8

INTRODUCTION

Teenage pregnancy is defined by international organizations as a pregnancy occurring in girl aged 13 to 19 years.¹ Approximately 11% of all births occur in teenage mother worldwide.² Around the world fifteen million women less than 20 years of age bear child which is one fifth of all births.³

These teenage adolescent girls face extensive health hazards during pregnancy and childbirth, contributing for 15% global load of diseases for maternal morbidities and consequently maternal deaths up to 13%.⁴

The circumstances in South Asian countries are unsympathetic, as there are greater shares of teenage pregnancy in this region due to communal practice of early marriage and subsequently social hope to have a child soon after marriage.⁵

Teenage pregnancies parallel to a time when there is ongoing changeover from childhood to adulthood with

probable encounter between physical and Psychological emotional and social development.⁶

Pregnancy induced hypertension have been seen in 12% of teenage group in comparison to 5% in adult group. The consensus on etiology of pregnancy induced hypertension is not entirely agreed and immunological factors seem to trigger the placental diseases where genetic arrangement governs maternal vulnerability.⁷ Study conducted in Bangladesh where social conditions are almost same as prevalent in Pakistan, concluded that more than 50% teenagers suffer from pregnancy induced hypertension, eclampsia, obstructed labour, postpartum hemorrhage and other childbirth complications.⁸

The prevalence of teenage pregnancy is still high worldwide, plenty of research has been done regarding the risk factors, complications and outcome of teenage pregnancy, but studies specifically focused on frequency of pregnancy induced hypertension in teenage pregnancy in scarce in Pakistan, so this study had been planned to observe specifically the frequency of induced hypertension in teenage mothers to identify the burden of this diseases and to take efficient steps in reducing the maternal and fetal morbidity and mortality in teenage pregnancies..

Correspondence: Dr. Shahida Shaikh

Assoc. Prof. Gynae and Obst. Unit-II, Sheikh Zaid Women Hospital Chandka Medical College Larkana

Cell No.: 0333-7543377

Email.shahida.doctor@gmail.com

MATERIALS AND METHODS

In this cross sectional study, a total of 163 teenage pregnant women were included. Sample size calculated according to prevalence of condition (12%)⁷ with non-probability consecutive sampling technique keeping confidence interval of 95% and absolute precision required 5%. These women were selected from outpatients department (OPD) and from the obstetric ward of Shaikh Zaid Women Hospital Larkana from 1st June 2013 to 1st December 2013 after informed written consent, once they were fulfilling inclusion criteria which are as under:

Inclusion Criteria:

- Age between 13 to 19
- Gestational age from 20 weeks onwards
- Singleton pregnancy on dating ultrasound
- Primigravidas and women with parity 1 or 2

Exclusion Criteria:

- Age of 20 or more than 20 Years
- Mother with major illness such as diabetes, chronic Hypertension and renal disease.
- Multi fetal pregnancy
- Smoking
- Congenital anomalies
- Pre-eclampsia and Eclampsia

Gestational age was diagnosed on earlier dating ultrasound and from last menstrual period. Pregnancy induced hypertension was diagnosed on the basis of clinical examination done by measuring blood pressure via well maintained sphygmomanometer. The criteria taken for hypertension was Blood pressure more than or equal to 140/90 and Urine for Albumin sent to Pathology lab for excluding preeclampsia. Information regarding age of women, parity and gestational age was taken from each patient. Data was recorded on predesigned proforma. Data was entered and analyzed using SPSS 10. Mean and standard deviation were computed for quantitative variables like age, gestational age. Frequency and percentage were presented for qualitative variables like pregnancy induced hypertension.

RESULTS

A total of 163 women with singleton pregnancy, gestational age from 20 weeks onwards were included in this study. Most of the patients were 16 to 17 years of age as presented in figure 1. The mean age and gestational age of the patients was 16.35 ± 1.68 years and 27.04 ± 3.44 weeks respectively as shown in table 1. Regarding parity status, 64(39.26%) women were primigravida, while 64(39.26%) came with history of having already given birth to one child (primipara) and 35(21.47%) had Para 2.

Frequency of pregnancy induced hypertension in teenage pregnancy was observed in 21.47% (35/163). Percentage of women with PIH was 30.2% in 13 to 15 years of age, 17.4% in 16 to 17 years of age and 19.6% had 18 to 19 years of age women. Significant difference was not observed among different age groups ($p=0.25$) as shown in table 2. Similarly frequency of PIH was also not significant between gestational age ($p=0.39$).

Table No.1: Descriptive Statistics of Study Patients n=163

Statistics		Age (Years)	Gestational Age (weeks)
Mean		16.35	27.04
Std. Deviation		1.68	3.44
95% Confidence Interval for Mean	Lower Bound	16.09	26.5
	Upper Bound	16.61	27.57
Minimum		13	20
Maximum		19	34

Table No.2: Frequency of pregnancy induced hypertension in teenage pregnancy with respect to age group

Age Groups (Years)	Pregnancy induced hypertension		Total
	Yes	No	
13 to 15 Years	13(30.2%)	30(69.8%)	43
16 to 17 Years	12(17.4%)	57(82.6%)	69
18 to 19 Years	10(19.6%)	41(80.4%)	51
Chi-Square=2.74; p=0.25			

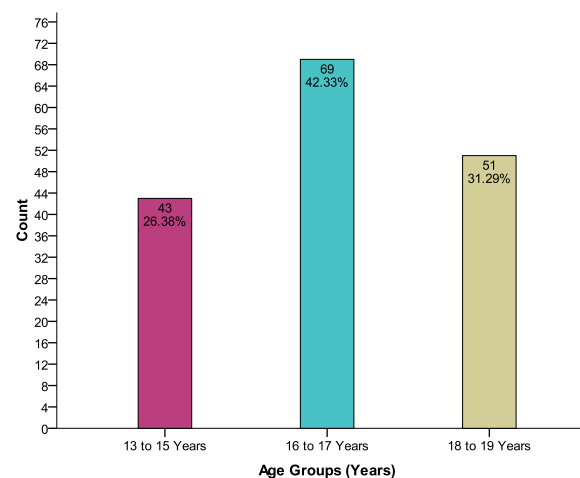


Figure No.1: Patients age groups.

DISCUSSION

Teenage pregnancy is a high risk pregnancy. Pakistan's environment is mired in aboriginal customs so consanguineous and early age marriages are beyond expectations, hence is rise in adolescent pregnancy. According to Pakistan demographic survey, up to 18 years of age 40% young girls get married.⁹ The

worldwide occurrence of ill-timed births and low birth weight is greater among teenage mothers and as because these girls have poor eating practices and are less likely to take adequate nutrition during pregnancy therefore, always at superior threat of having medical complications.

In our study most of the patients were of 16 to 17 years of age. The mean age patients was 16.35 ± 1.68 years which is very tender age and likely to have more problems as compared to adults. Closely related figures are seen in study done in Malaysia, where majority of teenage mothers were of 17 years,¹⁰ while in India it was 18 years.¹¹ However study done by Nusrat and colleagues involving multiple centers of Sindh province of Pakistan, the median age of adolescent pregnant women was 19 years.¹²

We had in our study observed the parity status as 39.26% women were primigravida, and surprisingly equal number was of (39.26%) mothers having history of already given birth to one child (primipara), may be because of earlier marriage in this age group and the rest of girls were even were (21.47%) Para 2. Highest number of nulliparous mothers were found in a study from a developing country Nigeria where these young nulliparous mothers even comprised up to 92% of study population.¹³ We had 21.47% mothers having parity of 2 even. Pregnancy outcome for teenage multiparous mothers is considered to be worse from complication point of view than those teenagers having first experience of child birth¹⁴. This later group's parity indicates poor consumption of contraceptive method and improper planning so these women had by this time two children before the age of 20 years. Level of education has been considered as predictor of marriage and higher is the education definitely late is marriage elderly is parous woman.¹⁵

Researchers are of opinion that young married women might not use the utmost ways of pregnancy prevention and seems to have more unintended pregnancies despite living in developed countries.^{16,17}

In present study frequency of pregnancy induced hypertension (PIH) in teenage pregnancy was observed in 21.47% (35/163). Our figures correlate with studies, where apart from other complications PIH found to be of 20%¹⁸ in one international and it was 18% in a local study.¹² Two other studies have concluded the frequency of Pregnancy induced hypertension in their studied population of teenage mothers was 30% and 32% respectively.^{19,20}

In spite of the extensive societal changes that have befallen during the previous two to three decades, the South Asian countries still have the highest level of teenage childbearing. According to one survey done in Bangladesh, more than 50% teenagers mothers suffer from pregnancy induced hypertension, eclampsia, obstructed labour, postpartum hemorrhage and delay in delivery of placenta risking them to face death.⁸ Same

magnitude of disease where only group of 70 teenage mothers were involved surprisingly showed the frequency of hypertensive disorders even up to 37% which is quite higher from our figures.²¹

In this study percentage of women with PIH was 30.2% in 13 to 15 years of age, 17.4% in 16 to 17 years of age and 19.6% had 18 to 19 years of age women. Significant difference was not observed among different age groups ($p=0.25$).

Teenage pregnancy is a polygonal problem and equally biologic and communal aspects add to the misery. Dearth, melancholy and social segregation are frequent trappings. Consequential stress on the teenage mothers may also lead to hostile occurring of chain of events undesirable for mothers.

CONCLUSION

Teenage pregnancy is connected with advanced risk of pregnancy induced hypertension. Teenage mothers generally come across with more problems during pregnancy and child birth than older women. Early booking, good care during pregnancy and delivery and proper consumption of contraceptive services can avert the worries in this group. Efforts need to be directed towards strict enforcement of laws prohibiting teenage marriage in Pakistan. Access to quality health services that are gender-sensitive and adolescent-friendly should be ensured.

REFERENCES

1. UNICEF. Fact Sheet: World Population Day. UNICEF Malaysia Communications Young People and Family Planning: Teenage Pregnancy; 2008; Available from: http://www.unicef.org/malaysia/Teenage_Pregnancies_Overview.pdf, Accessed 02/12/12.
2. James RE. Position paper on mainstreaming adolescent pregnancy in efforts to make pregnancy safer. WHO Geneva Switzerland 2010.
3. WHO. Maternal mortality ratios and rates: a tabulation of available information. 3rd Edition, World Health Organization 1991; Geneva. WHO/MCH/MSM/91.6.
4. World Health Organization. Adolescent pregnancy—unmet needs and undone deeds: a review of the literature and programs. Geneva, Switzerland: WHO Press; 2007.
5. Kovaivisarach E, Chairaj S, Tosang K, Savapiryanont AS, Chotigeat U. Outcome of teenage pregnancy in Rajavithi Hospital. J Med association Thai 2010;93(1):1-8.
6. Khashan AS, Baker NP, Kenny LC. Preterm birth and reduced birth weight in first and second teenage pregnancies a register based cohort study. BMC pregnancy and Childbirth 2010;10:31-6.

7. Naqvi MM, Naseem A. Maternal and fetal risks associated with teenage and adult pregnancy. *JRMC* 2010;14 (1):40-2.
8. Banerjee B. Teenage pregnancy: a socially inflicted health hazard. *Ind J Comm Med* 2009;34(3): 227-231.
9. Pakistan Demographic and Health Survey 2006-07. Islamabad, Pakistan: National Institute of Population Studies and Macro International Inc. 2008.
10. Sulaiman S, Othman S, Razal N, Hassan J. Obstetric and perinatal outcome in teenage pregnancies. *S Afr J OG* 2013; 19 (3):74-7.
11. Kumar A, Singh T, Basu S, Pandey S, Bhargava V. Outcome of teenage pregnancy. *Ind J Pediatr* 2007; 74 (10):927-931.
12. 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.
13. Udo A, Ekott M, Ekanem E. Teenage Pregnancy and Adverse Birth Outcomes in Calabar, Nigeria. *The Int J of Gyne and Obst* 2013;17 (2).
14. Klerman LV. Risk of poor pregnancy outcomes: is it higher among multiparous teenage mothers? *J Adolesc Health* 2006;38 (6):761-4.
15. Akter S, Rahman MM. Direct and Indirect Effects of Socioeconomic Factors on Age at First Marriage in Slum Areas, Bangladesh. *Chinese J Population Resources and Environment* 2009;7(3):79-82.
16. 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.
17. Whitaker AK, Gilliam M. Contraceptive care for adolescents. *Clin Obstet Gynecol* 2008;51(2): 268-280.
18. Chahande MS, Jadho AR, Wadhwa SK, Udhade S. Study of some epidemiological factors in teenage pregnancy hospital based case comparison study. *Ind J Comm Med* 2002;27:106-9.
19. Saxena P, Salhan S, Chattopadhyay B, Kohli M, Nandan D, Adhish SV. Obstetric and perinatal outcome of teenage and older primigravidas- a retrospective analysis. *Health and Population: Perspectives and Issues* 2010;33(1):16-22.
20. 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.
21. Grover N, Sandhu KK. Teenage Pregnancy: Too Much Too Soon. *JSAFOG* 2009; 1(3):41-3.