

ORIGINAL ARTICLE**PREVALENCE OF HYPERTENSION & OTHER SYMPTOMS IN PREGNANT WOMEN: A CLINICAL STUDY**Seema Mishra¹, Kalpana Gupta²¹Associate Professor, ²Assistant Professor, Department of Obstetrics and Gynaecology, Mayo Institute of Medical Science, Barabanki, U.P.**ABSTRACT:**

Background: Pregnancy is the physiological state. There can be many complications during pregnancy. These include hypertension, hemorrhage, infection, cervical insufficiency, gestational diabetes and preterm labour, etc. This study recorded the pregnancy induced hypertension and other symptoms in pregnant women. **Materials & Methods:** This study included 2538 pregnant women visited the department during this period. A performa was made and all relevant information regarding name, age were entered. Blood pressure was measured in all women using mercury sphygmomanometer was used throughout the study. Proteinuria was detected by commercially available dipsticks. Value $\geq 1+$ was indicative of proteinuria. **Results:** Pre- eclampsia was diagnosed in 60%, gestational hypertension in 22%, eclampsia in 12% and chronic hypertension in 6% of cases. We have recorded various symptoms in study patients. Most commonly seen symptoms were swelling on face/legs (102), headache (45), breathlessness (21), giddiness (14), vomiting (12) and convulsions (9). The difference was significant (P-0.02). Maximum patients with hypertension were seen in age group 18-23 years (126), 24- 28 years (61), 29-34 years (10) and >34 years (6). The difference of distribution on the basis of age group was significant (P-0.05). We have also recorded the education status of patients. 45% (92) were having education upto middle school, 42% (86) upto high school and 13% (25) more than high school. The difference was non significant. 143 patients were housewife, 50 were labourers, 6 were in business and 5 were in service. **Conclusion:** Author concluded that the prevalence of hypertension among pregnant women was 8%. Women should be educated regarding toxemia of pregnancy to avoid complications.

Key Words: Hemorrhage, Hypertension, Infection, Pregnancy

Corresponding Author: Dr. Seema Mishra, Associate Professor, Department of Obstetrics and Gynaecology, Mayo Institute of Medical Science, Barabanki, U.P., India

This article may be cited as: Mishra S, Gupta K. Prevalence of hypertension & other symptoms in pregnant women: A clinical study. J Adv Med Dent Scie Res 2016;4(6):227-230.

Access this article online	
Quick Response Code 	Website: www.jamdsr.com
	DOI: 10.21276/jamdsr.2016.4.6.55

INTRODUCTION

Pregnancy is the physiological state. Childbirth usually takes about 38 weeks after conception, which is approximately 40 weeks from the last menstrual period. The WHO defined normal term for delivery as between 37 weeks and 42 weeks.¹ There can be many complications during pregnancy. These include hypertension, hemorrhage, infection, cervical insufficiency, gestational diabetes and preterm labour, etc. Among all complications, hypertension is the leading causes of maternal and perinatal deaths in developing

countries. Hypertensive disorders of pregnancy rank high among the causes of maternal mortality and morbidity. Hypertension in pregnancy is defined as a systolic BP of 140 mmHg and higher, and a diastolic BP of 90 mmHg and higher. It affects 5% - 8% of all pregnancies and it affects 20% - 30% of the adult population. Studies have shown that almost 15% of maternal deaths are related to hypertension (HTN).²

The American College of Obstetricians and Gynecologists (ACOG) has classified pregnancy induced hypertension (PIH) into four types: 1. gestational hypertension, where

after the 20th week of gestation, resting BP is 140/90 mmHg or higher; 2. chronic hypertension, which exists before pregnancy or begins in the first 20 weeks of gestation; 3. preeclampsia that is raised BP and edema or proteinuria/ eclampsia which includes preeclampsia and seizures; and 4. preeclampsia superimposed on chronic hypertension.³

The incidence of preeclampsia is 10% in primigravidae and 5% in multigravidae. A study conducted by Zhang⁴ and associates reported that the incidence of preeclampsia was doubled in women whose daily intake of ascorbic acid was less than 85 mg. This study recorded the pregnancy induced hypertension and other symptoms in pregnant women.

MATERIALS & METHODS

The present cross sectional study was conducted in the department of gynaecology and obstetrics from Jan 2016 to June 2016. This study included 2538 pregnant women visited the department during this period. A performa was made and all relevant information regarding name, age were entered. Blood pressure was measured in all women using mercury sphygmomanometer was used throughout the study. Proteinuria was detected by commercially available dipsticks. Value $\geq 1 +$ was indicative of

proteinuria. Results were then subjected to statistical analysis. P value <0.05 was indicative of significant results.

RESULTS

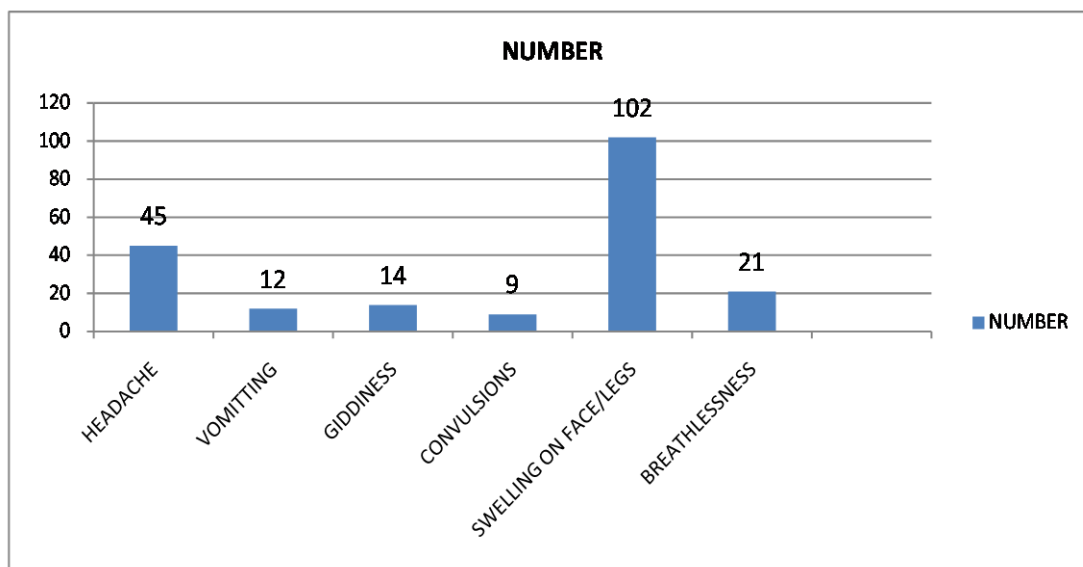
Table I shows distribution of patients on the basis of hypertensive disorder of pregnancy. Pre- eclampsia was diagnosed in 60%, gestational hypertension in 22%, eclampsia in 12% and chronic hypertension in 6% of cases. We have recorded various symptoms in study patients. Most commonly seen symptoms were swelling on face/legs (102), headache (45), breathlessness (21), giddiness (14), vomiting (12) and convulsions (9). The difference was significant (P-0.02) (Graph I).

Graph II shows that maximum patients with hypertension were seen in age group 18-23 years (126), 24- 28 years (61), 29-34 years (10) and >34 years (6). The difference of distribution on the basis of age group was significant (P-0.05). We have also recorded the education status of patients. 45% (92) were having education upto middle school, 42% (86) upto high school and 13% (25) more than high school. The difference was non significant (Graph III). Table II shows 143 patients were housewife, 50 were labourers, 6 were in business and 5 were in service. The difference was significant (P-0.01).

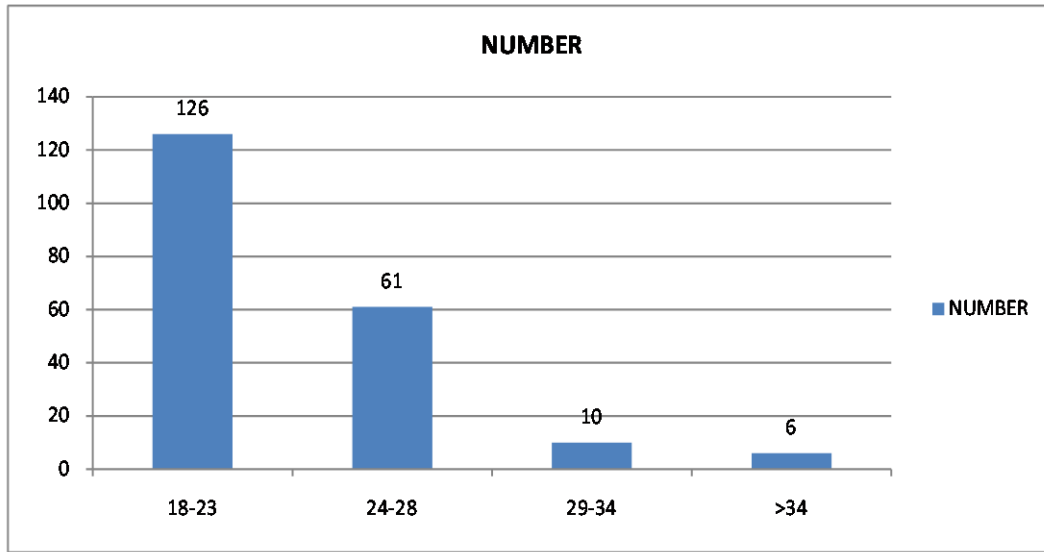
TABLE I: Distribution of patients

CONDITION	NUMBER
Pre-Eclampsia	122 (60%)
Gestational Hypertension	44 (22%)
Eclampsia	25 (12%)
Chronic Hypertension	11 (6%)
Total	203 (100%)

GRAPH I Frequency of symptoms in patients



GRAPH II Distribution of patients on the basis of age group



GRAPH III Distribution of patients on the basis of education status

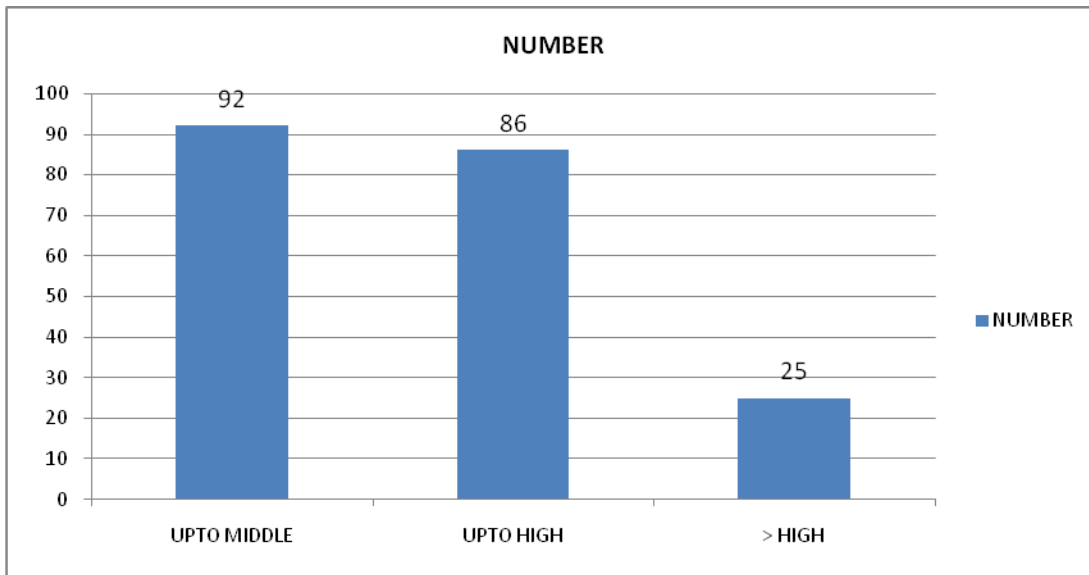


TABLE II Distribution of patients according to occupation

OCCUPATION	NUMBER
Housewife	143
Bussiness	6
Labourer	50
Service	5

DISCUSSION

Pregnancy is a common physiological process. It has many complications associated with it. Most common is hypertension. In this study, we estimated the prevalence of hypertension in pregnant women visited the department of gynaecology and obstetrics. We examined 2538 pregnant women and found that hypertension is present in 203 (8%) women.

Roberts et al. (2005)⁵ examined hypertensive pregnancy disorders in 250,173 pregnant women and their newborns in Sydney-Australia. 9.8% of the mothers had pregnancy induced hypertension (PIH) disorders. Another study conducted in Nigeria on 2393 deliveries found 127 (5.3%) cases affected with PIH disorders.⁶

Pre-eclampsia was diagnosed in 60%, gestational hypertension in 22%, eclampsia in 12% and chronic hypertension in 6% of cases. However study by Henry⁷ in his study recorded Pre-eclampsia in 42%, eclampsia in 2% and chronic hypertension in 26% and gestational hypertension in 36% of cases.

We have recorded various symptoms in study patients. Most commonly seen symptoms were swelling on face/legs, headache, breathlessness, giddiness, vomiting and convulsions.

Shruti S.Dubhashi et al⁸ conducted a study at B.Y. Nairhospital in Mumbai, India found that edema experienced by 54% of patients followed by headache (30%) followed by blurring of vision and oligouria (2%). J.Prakash et al⁹ observed that edema was the most common symptom, followed by headache (51.39), eclamptic convulsions (40.28%), epigastric pain(27.77%) and blurring of vision.

We found that maximum patients with hypertension were seen in age group 18-23 years (126), followed by 24- 28 years (61), 29-34 years (10) and >34 years (6). Similar results were found in study by L Y C Poon et al.¹⁰ who found that hypertensive in pregnancy is common in age group 15-25 yrs. We have also recorded the education status of patients. 45% (92) were having education upto middle school, 42% (86) upto high school and 13% (25) more than high school.

Our study showed 143 patients were housewife, 50 were labourers, 6 were in business and 5 were in service. Hinggins et al(2002)¹¹ found that prevalence of hypertension during pregnancy is more among women who have to do more physical work during pregnancy.

CONCLUSION

Author concluded that the prevalence of hypertension among pregnant women was 8%. Women should be educated regarding toxemia of pregnancy to avoid complications.

REFERENCES

1. Park K.: 'Park's Textbook of preventive and social medicine' 20th edition, M/s Banarasidas Bhanot Publishers, Jabalpur: 447 (2001).
2. Ali Amir, Mohd. Yunus, H.M.Islam: 'Clinico-Epidemiological Study of Factors Associated with Pregnancy Induced Hypertension'. Indian journal of Community Medicine. 1998; 1: 25-29.
3. Ashok Kumar et al: 'Calcium Supplementation for prevention of pre-eclampsia.'International Journal of Gynaecology and Obstetrics. 2009; 104: 32-36.
4. Zhang C, Williams MA, King IB et al. Vitamin C and the risk of preeclampsia-results from dietary questionnaire and plasma assay. Epidemiology. 2002; 13:409-416.
5. Robert CL et al: 'Hypertensive disorders in Pregnancy: a population based study.' Med. J. 2005; 182: 332-5.
6. Ashok Kumar et al: 'Calcium Supplementation for prevention of pre-eclampsia.'International Journal of Gynaecology and Obstetrics. 2009; 104: 32-36.
7. Henry, C.S., Biedermann, S.A., Campbell, M.F. and Guntupalli, J.S. (2004) Spectrum of Hypertensive Emergencies in Pregnancy. Critical Care Clinics. 2010; 607-712.
8. Shruti S.Dubhashi, R.J. Wani, Priti Chikhla, C V Hegde: 'PIH – confounding situations, Management Dilemmas and sever consequences: Dose Antenatal Care have a Role?'Bombay Hospital Journal. 2008; 50:34-37.
9. J.Prakash, L K Pandey, AK Singh, B Kar : 'Hypertension in Pregnancy: Hospital Based Study'.JAPI. 2006; 273-276.
10. LCY Poon et al: 'Maternal Risk factors for hypertensive disorders in pregnancy:A multivariate approach.' Journal of Human Hypertension. 2010; 24: 104-110.
11. J. Higgins J.Walshe, R.Conroy and M.Darling: 'The relation between maternal work, ambulatory blood pressure and pregnancy Hypertension.' Journal of epidemiology community health. 2002; 56: 389-393.

Source of support: Nil

Conflict of interest: None declared

This work is licensed under CC BY: *Creative Commons Attribution 3.0 License*.