



Analysis of Cases of Gestational Hypertension in Pregnant Women: A Clinical Study

Authors

Sharad Mishra¹, Shankar Singh Gaur²

¹Principal Specialist (Gynaecology & Obstetrics), D.B. General Hospital, Churu, Rajasthan, India

²Senior Specialist (General Surgery), D.B. General Hospital, Churu, Rajasthan, India

Corresponding Author

Dr Shankar Singh Gaur

Senior Specialist (General Surgery), D.B. General Hospital, Churu, Rajasthan, India

Email: shankarsinghgaur@gmail.com

Abstract

Background: *Pregnancy is associated with many complications. 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. This present study was conducted to determine pregnancy induced hypertension and other symptoms.*

Materials & Methods: *The present study was conducted in the department of Gynaecology and Obstetrics D.B. General Hospital, Churu, Rajasthan, India.. It included 1860 pregnant women. General information such as name, age etc. was recorded. In all, blood pressure was measured in using mercury sphygmomanometer.*

Results: *Out of 1860 women hypertensive disorder of pregnancy was seen in 248 women. Pre- eclampsia was seen in 50%, gestational hypertension in 20%, eclampsia in 12% and chronic hypertension in 18% of cases. Common symptoms were swelling on face/legs (110), headache (40), breathlessness (25), giddiness (28), vomiting (22) and convulsions (16). The difference was significant (P-0.01). 160 patients were housewife, 32 were in business, 45 were labourers and 11 were in service. The difference was significant (P-0.01). Maximum patients with hypertension were seen in age group 18-23 years (134), 24- 28 years (68), 29-34 years (30) and >34 years (16). The difference was significant (P< 0.05).*

Conclusion: *There are many complications in pregnant women. The prevalence of hypertension among pregnant women was 13.4%. Women should be educated regarding toxemia of pregnancy to avoid complications.*

Keywords: *Hypertention, Labourers, Pregnancy.*

Introduction

Pregnancy, also known as gestation, is the time during which one or more offspring develops

inside a woman. A multiple pregnancy involves more than one offspring, such as with twins. Pregnancy can occur by sexual intercourse or

assisted reproductive technology. Childbirth typically occurs around 40 weeks from the last menstrual period (LMP). 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

Each year, ill health as a result of pregnancy is experienced by more than 20 million women around the world. Common causes include maternal bleeding, complications of abortion, high blood pressure of pregnancy, maternal sepsis, obstructed labor, hemorrhage, infection, cervical insufficiency, gestational diabetes and preterm labour, etc.² 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).³ This present study was conducted to determine pregnancy induced hypertension and other symptoms.

Materials & Methods

The present study was conducted in the department of Gynaecology and Obstetrics. D.B. General Hospital, Churu, Rajasthan, India. It included 1860 pregnant women visited the department. All were informed regarding the study and written consent was obtained. Ethical approval was taken prior to the start of study.

General information such as name, age etc. was recorded. In all, blood pressure was measured in using mercury sphygmomanometer. Results were tabulated and then subjected to statistical analysis. P value <0.05 was suggestive of significant results.

Results

Table I Distribution of patients

Condition	Number
Pre-eclampsia	124 (50%)
Gestational hypertension	50 (20%)
Eclampsia	30 (12%)
Chronic hypertension	44 (18%)
Total	248 (100%)

Table I shows that out of 1860 women hypertensive disorder of pregnancy was seen in 248 women. Pre- eclampsia was seen in 50%, gestational hypertension in 20%, eclampsia in 12% and chronic hypertension in 18% of cases.

Table II Symptoms in patients

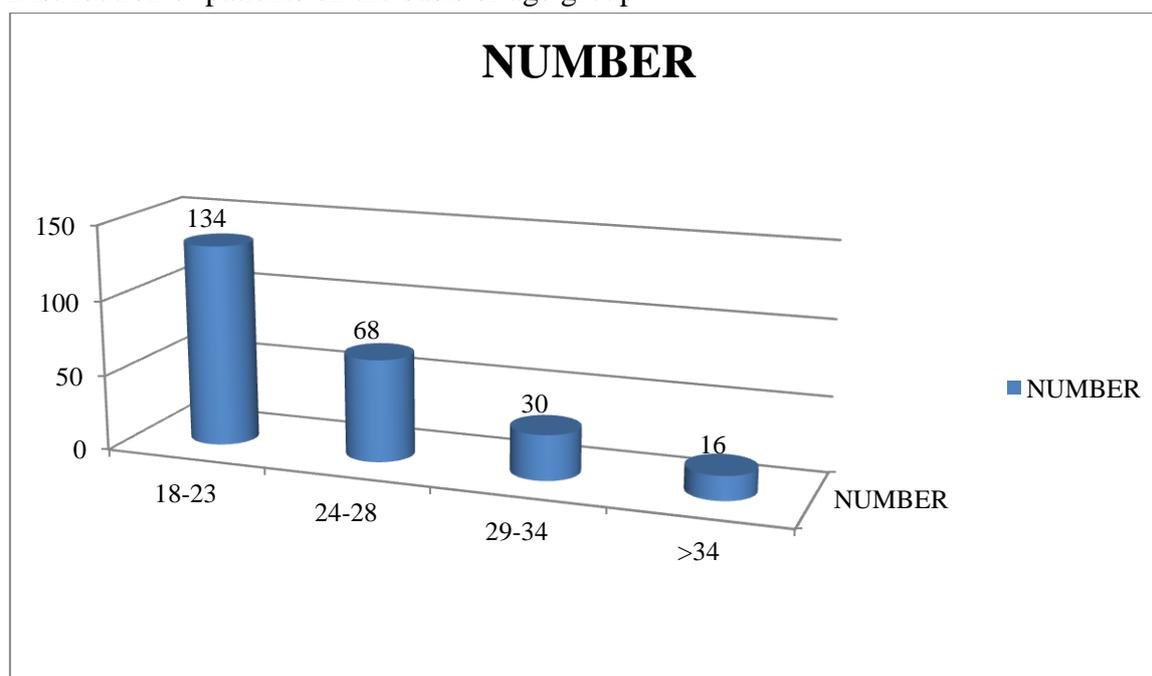
Symptoms	Number	P value
Headache	40	0.01
Vomitting	22	
Giddiness	28	
Convulsions	16	
Swelling on face/legs	110	
Breathlessness	25	

Table II shows common symptoms such as swelling on face/legs (110), headache (40), breathlessness (25), giddiness (28), vomiting (22) and convulsions (16). The difference was significant (P-0.01)

Table III Distribution of patients according to occupation

Occupation	Number	P value
Housewife	160	0.01
Bussiness	32	
Labourer	45	
Service	11	

Table III shows 160 patients were housewife, 32 were in business, 45were labourers and 11 were in service. The difference was significant (P-0.01).

Graph I Distribution of patients on the basis of age group

Graph I shows that maximum patients with hypertension were seen in age group 18-23 years (134), 24-28 years (68), 29-34 years (30) and >34 years (16). The difference was significant ($P < 0.05$).

Discussion

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. The incidence of preeclampsia is 10% in primigravidae and 5% in multigravidae.⁴ A study conducted by Zhang⁵ and associates reported that the incidence of preeclampsia was doubled in women whose daily intake of ascorbic acid was less than 85 mg. 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 1860 pregnant women and found that hypertension is present in 248 (13.4%) women.

Ashok et al⁶ examined hypertensive pregnancy disorders in 244,120 pregnant women and found that 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.⁷

We found that pre-eclampsia was seen in 50%, gestational hypertension in 20%, eclampsia in 12% and chronic hypertension in 18% of cases. However study by Shruti S. Dubhashi et al⁸ recorded pre-eclampsia in 40%, eclampsia in 16% and chronic hypertension in 24% and gestational hypertension in 20% 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. Henry⁹ conducted a study and found that 44% of patients had headache (30%) followed by blurring of vision and oligouria (12%). Prakash et al¹⁰ observed that edema was the most common symptom, followed by headache (50%), eclamptic convulsions (48%), epigastric pain (27%) and blurring of vision (14%).

We found that 160 patients were housewife, 32 were in business, 45 were labourers and 11 were in service. JL Y C Poon et al.¹¹ found that prevalence of hypertension during pregnancy is more among women who have to do more physical work during pregnancy. Maximum patients with hypertension were seen in age group 18-23 years (134), 24- 28 years (68), 29-34 years (30) and >34 years (16). This is in agreement with Higgins J.¹²

Conclusion

There are many complications in pregnant women. The prevalence of hypertension among pregnant women was 13.4%. Women should be educated regarding toxemia of pregnancy to avoid complications.

References

1. Babae, Gh., Keshavarz, M., Parsinia, M. and Ashkvari, P. Evaluation of Effective Factors on Low Birth Weight Neonates' Mortality Using Path Analysis. Tehran University Medical Journal 2008; 66, 52-56.
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. Robert CL el at: 'Hypertensive disorders in Pregnancy: a population based study.' Med. J. 2005; 182: 332-5.
4. Hadavi, M., Alidalaky, S., Abedini, M. and Aminzadeh, F. Factors Affecting Perinatal Mortality in the City of Rafsanjan Medical Centers in 2004-2006. Rafsanjan Medical Sciences Journal 2009; 8:117-126.
5. 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.
6. Ashok Kumar et al: 'Calcium Supplementation for prevention of pre-eclampsia.' International Journal of Gynaecology and Obstetrics. 2009; 104: 32-36.
7. Park K.: 'Park's Textbook of preventive and social medicine' 20th edition, M/s Banarasidas Bhanot Publishers, Jabalpur: 447 (2001).
8. Shruti S. Dubhashi, R.J. Wani, Priti Chikhal, 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. Henry, C.S., Biedermann, S.A., Campbell, M.F. and Guntupalli, J.S. Spectrum of Hypertensive Emergencies in Pregnancy. Critical Care Clinics.2010; 607-712.
10. J.Prakash, L K Pandey, AK Singh, B Kar : 'Hypertension in Pregnancy: Hospital Based Study'. JAPI. 2006; 273-276.
11. LCY Poon et al: 'Maternal Risk factors for hypertensive disorders in pregnancy: A multivariate approach.' Journal of Human Hypertension. 2010; 24: 104-110.
12. J. Higgins J.Walsh, 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.