

Prevalence of Hypertensive Female Patients Visited in Department at a Tertiary care Teaching Hospital

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ABSTRACT

Background: Hypertension is usually defined by the presence of a chronic elevation of systemic arterial pressure above a certain threshold value. Hypertension is a prevalent risk factor for cardiovascular and chronic kidney disease as well as premature disability and death. Hence; the present study was planned for assessing the prevalence of hypertensive female's patients visiting the department of internal medicine.

Materials & Methods: A total of 580 patients reporting to the Department of General Medicine, Rama Medical College Hospital & Research Centre, Pilkhuwa, Hapur, Uttar Pradesh (India) during the study period were assessed. Detailed demographic and clinical details of all the subjects were obtained. Past medical history and past family history of all the subjects was also obtained. All the data were compiled and were analyzed by SPSS software.

Results: The overall prevalence rate of hypertensive females in the present study was 8.96 % (52 patients). Significant results were obtained while assessing the age-wise distribution of hypertensive female patients. Significant results were obtained while assessing the distribution of patients according to presence of obesity and diabetes.

Conclusion: Hypertension is a common condition affecting significant proportion of female population. Hypertension is also associated with significant risk factors, which includes old age, presence of diabetes and obesity.

Key words: Blood Pressure, Hypertension, Females.

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INTRODUCTION

Hypertension is usually defined by the presence of a chronic elevation of systemic arterial pressure above a certain threshold value. Hypertension is a prevalent risk factor for cardiovascular and chronic kidney disease as well as premature disability and death. U.S. Healthy People goals for hypertension prevention and control further attest to the public health importance of this diagnosis.¹⁻³ Temporal trends in the prevalence, awareness, treatment and control of hypertension are of major public health importance and an indirect measure of the effectiveness of healthcare policy and delivery in attaining key public health objectives.⁴ BP rises after menopause in most women, and it has been postulated that withdrawal of endogenous estrogen, a potent vasodilator, plays a key role in postmenopausal hypertension.^{5,6} Hence; under the light of above mentioned data, the present study was planned for assessing the prevalence of hypertensive female's patients visiting the department of internal medicine.

MATERIALS & METHODS

The present study was planned in the Department of General Medicine, Rama Medical College Hospital & Research Centre, Pilkhuwa, Hapur, Uttar Pradesh (India) and it included assessment of prevalence of hypertensive female's patients visiting the department. Ethical approval was obtained from ethical committee of the institution and written consent was obtained from all the patients after explaining in detail the entire research protocol. A total of 580 patients reporting to the department of internal medicine during the study period were assessed. Detailed demographic and clinical details of all the subjects were obtained. Past medical history and past family history of all the subjects was also obtained. Criteria described previously in the literature were used for diagnosing patients with hypertension.⁷ All the data were compiled and were analyzed by SPSS software. Chi-square test was used for assessment of level of significance.

RESULTS

In the present study, a total of 580 subjects reporting to the department of internal medicine of the medical institute were analyzed. The overall prevalence rate of hypertensive females in the present study was 8.96 % (52 patients). In the present study, among the 52 hypertensive females, 55.78 percent of the patients belonged to the age group of more than 48 years, while 28.24 and 15.38 percent of the patients belonged to the age group of 28 to 48 years and less than 28 years respectively. Significant results

were obtained while assessing the age-wise distribution of hypertensive female patients.

In the present study, among the 52 hypertensive female patients, 35 patients were obese while the remaining 17 patients were non-obese. Among the 52 female hypertensive patients, 39 patients were diabetic while the remaining 13 patients were non-diabetic. Significant results were obtained while assessing the distribution of patients according to presence of obesity and diabetes.

Table 1: Overall prevalence of hypertension among females

Parameter	Number of patients	Percentage of patients
Hypertensive females	52	8.96

Table 2: Age-wise distribution of patients

Age group (years)	Number of patients	Percentage	p- value
Less than 28	8	15.38	0.00 (Significant)
28 to 48	15	28.84	
More than 48	29	55.78	
Total	52	100	

Table 3: Distribution of patients according to presence of associated factors

Factors	Present	Absent	p- value
Obesity (n=52)	35	17	0.01(Significant)
Diabetes (n=52)	39	13	0.02 (Significant)
Past family history of hypertension (n=52)	28	24	0.25(non-Significant)

DISCUSSION

Hypertension is a progressive CV syndrome arising from complex and interrelated etiologies. Early markers of the syndrome are often present before BP elevation is sustained; therefore, hypertension cannot be classified solely by discrete BP thresholds. Progression is strongly associated with functional and structural cardiac and vascular abnormalities that damage the heart, kidneys, brain, vasculature, and other organs and lead to premature morbidity and death. Reduction of BP when target organ damage is demonstrable or the functional precursor of target organ damage is present and still reversible generally reduces the risk for CV events. Note that we separate elevated BP (one manifestation of the disease) from hypertension (the disease).⁶⁻⁸ In the present study, a total of 580 subjects reporting to the department of internal medicine of the medical institute were analyzed. The overall prevalence rate of hypertensive females in the present study was 8.96 % (52 patients). Elevated blood pressure is the most important modifiable risk factor for vascular disease and mortality in developed nations. There is a strong log-linear relationship between blood pressure levels and vascular outcomes, and there is robust evidence from randomized trials showing that reducing blood pressure can prevent cardiovascular events (particularly stroke).⁹ The reason for gender difference in blood pressure levels is multifactorial and incompletely understood. There are several hypotheses including the potential role of sex hormones, the renin-angiotensin system (RAS), oxidative stress, endothelin, weight gain and sympathetic activation.¹⁰

In the present study, among the 52 hypertensive females, 55.78 percent of the patients belonged to the age group of more than 48 years, while 28.24 and 15.38 percent of the patients belonged to the age group of 28 to 48 years and less than 28 years respectively. Significant results were obtained while assessing the age-wise distribution of hypertensive female patients. Hypertension is an important risk factor for CVD in women. There are specific risk factors in women which may contribute to CVD risk. Preeclampsia has been shown to increase the risk for future hypertension by fourfold, and doubling the risk of future CHD compared with women with uncomplicated pregnancy. It has also been shown that preeclampsia is a risk factor for subsequent end-stage renal disease, although the absolute risk is low. Another important aspect of hypertension in pregnancy is the increased risk of having a low-birth weight infant. As low birth weight is a risk factor for future CHD, hypertension in pregnancy can influence the health of the next generation.¹¹⁻¹³

In the present study, among the 52 hypertensive female patients, 35 patients were obese while the remaining 17 patients were non-obese. Among the 52 female hypertensive patients, 39 patients were diabetic while the remaining 13 patients were non-diabetic. Significant results were obtained while assessing the distribution of patients according to presence of obesity and diabetes. Bateman BT et al examined the epidemiology of hypertension in women of reproductive age. Using NHANES from 1999–2008, we identified 5,521 women age 20–44 years old. Hypertension status was determined using blood pressure measurements and/or

self-reported medication use. The estimated prevalence of hypertension in women of reproductive age was 7.7%. The prevalence of anti-hypertensive pharmacologic therapy was 4.2%. The prevalence of hypertension was relatively stable across the study period; the age and race adjusted odds of hypertension in 2007–2008 did not differ significantly from 1999–2000. Significant independent risk factors associated with hypertension included older age, non-Hispanic black race (compared to non-Hispanic whites), diabetes mellitus, chronic kidney disease, and higher body mass index. The most commonly used antihypertensive medications included diuretics, angiotensin-converting enzyme inhibitors (ACE), and beta blockers. Hypertension occurred in about 8% of women of reproductive age.¹⁴

CONCLUSION

Under the light of above obtained data, the authors conclude that hypertension is a common condition affecting significant proportion of female population. Hypertension is also associated with significant risk factors, which includes old age, presence of diabetes and obesity.

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