ORIGINAL RESEARCH

Assessment of hypertension among patients visiting general medicine department

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Received: 22 April, 2014 Accepted: 25 May, 2014

ABSTRACT

Background: In low- and middle-income nations, especially those in Asia, the prevalence of chronic non-communicable diseases (NCDs), including heart disease, stroke, hypertension, diabetes, cancer, and chronic respiratory illness, is on the rise. The present study was conducted to assess hypertension among patients visiting general medicine department. **Materials & Methods:** 115 patients visiting general medicine department of both genders were selected. Two measurements of the blood pressure of each study participant were made 30 minutes apart, with the participants in the sitting position, by using a mercury column sphygmomanometer. Hypertension was diagnosed when the systolic BP was ≥ 140mmHg and/or the mean diastolic BP was ≥ 90mmHg. **Results:** Out of 115 patients, 68 were males and 47 were females.27 subjects were normal, 30 had pre- hypertension, 25 had stage I and 33 had stage II hypertension. The difference was non- significant (P> 0.05). The mean SBP among males was 142.6 mm Hg and in females was 141.2 mm Hg. The mean DBP among females was 141.2 mm Hg and DBP was 90.6 mm Hg. The difference was non- significant (P> 0.05).SES was upper class in 8, upper middle in 10, middle class in 12, lower middle in 24 and lower class in 32 patients. The difference was non- significant (P> 0.05). **Conclusion:** It was discovered that a large percentage of the outside patients had hypertension. This study highlights the importance of early hypertension detection, which can be achieved through routine population screenings conducted both in hospitals and in the community.

Keywords: middle-income, communicable diseases, hypertension

INTRODUCTION

In low- and middle-income nations, especially those in Asia, the prevalence of chronic non-communicable diseases (NCDs), including heart disease, stroke, hypertension, diabetes, cancer, and chronic respiratory illness, is on the rise. The most prevalent condition seen in people who are outside is hypertension.[1] It is a well-known significant risk factor and a substantial contributor to cardiovascular illnesses globally. In developing nations, hypertension and associated problems are becoming more common. By 2020, the leading cause of mortality and disability in India will be cardiovascular diseases.[2] This quick rise could be ascribed to dietary and lifestyle modifications, economic growth, and an increase in life expectancy. One of the iceberg diseases is hypertension.[3] Numerous studies have demonstrated that the awareness, treatment, and control of hypertension among Indian adults are at unacceptable rates.[4,5]

Thus, hypertension is emerging as a major health problem. The prevalence of hypertension has increased more among the urban communities than among the rural people.[6] The prevalence of hypertension will increase even further, unless broad and effective preventive measures are implemented. Prevention programmes and policies are in their infancy in India.[7]The present study was conducted to assess hypertension among patients visiting general medicine department.

MATERIALS & METHODS

The study was carried out on 115 patients visiting general medicine department of both genders. All gave their written consent to participate in the study.

Data such as name, age, gender etc. was recorded. Two measurements of the blood pressure of each study participant were made 30 minutes apart, with the participants in the sitting position, by using a mercury column sphygmomanometer. The blood pressure was graded as normal (SBP 160 and/or DBP > 100 mmHg), as per the US Seventh Joint National Committee on the Detection, Evaluation and the Treatment of Hypertension (JNC VII) criteria. Hypertension was diagnosed when the systolic BP

was ≥ 140mmHg and/or the mean diastolic BP was ≥ 90mmHg.

Results thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 115		
Gender	**Male**	**Female**
Number	68	47

Table I shows that out of 115 patients, 68 were males and 47 were females.

Table II Blood pressures measured as per JNC-VII criteria

Gender	Normal	Pre hypertension	Stage I hypertension	Stage II hypertension
Male	14	18	16	20
Female	13	12	9	13
Total	27	30	25	33
P value	0.81			

Table II, graph I shows that 27 subjects were normal, 30 had pre- hypertension, 25 had stage I and 33 had stage II hypertension. The difference was non- significant (P> 0.05).

Graph I Blood pressures measured as per JNC-VII criteria

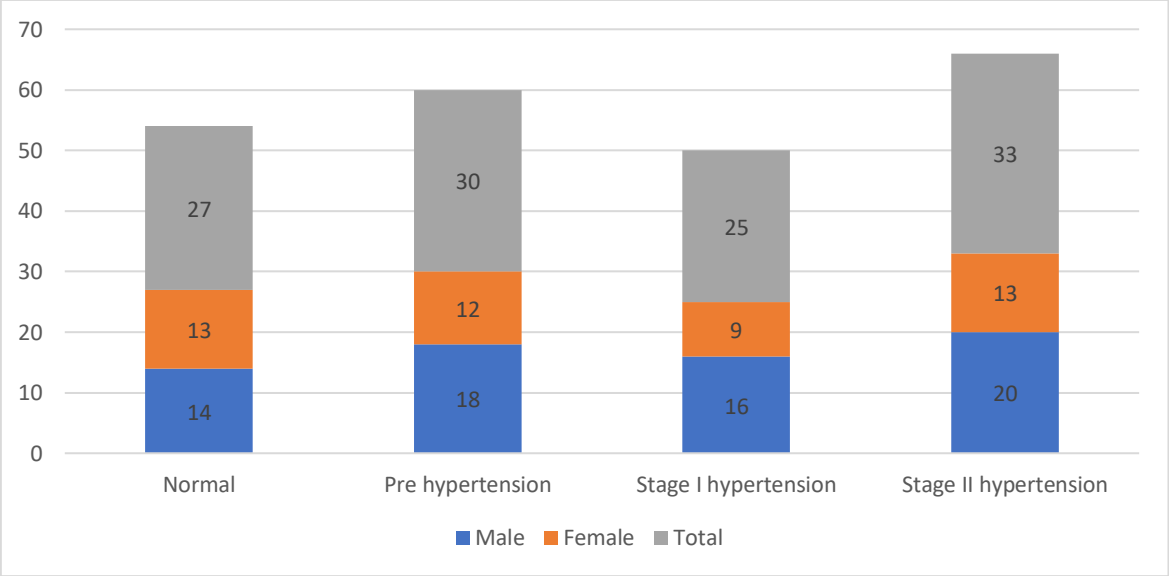

Table III Blood pressure among both genders

Gender	Total	SBP (mm Hg)	DBP (mm Hg)
Male	52	142.6	96.4
Female	34	141.2	90.6
P value	86	0.82	0.74

Table III shows that mean SBP among males was 142.6 mm Hg and in females was 141.2 mm Hg. The mean DBP among females was 141.2 mm Hg and DBP was 90.6 mm Hg. The difference was non- significant (P> 0.05).

Table IV Hypertension in relation to socioeconomic status

SES	Number	P value
Upper class	8	0.62
Upper-middle	10	
Middle class	12	
Lower-middle	24	
Lower class	32	

Table IV shows that SES was upper class in 8, upper middle in 10, middle class in 12, lower middle in 24 and lower class in 32 patients. The difference was non- significant (P> 0.05).

DISCUSSION

The leading cause of mortality worldwide, cardiovascular disease accounted for 16.7 million fatalities in 2003, or 29.2% of all deaths worldwide.[8] While many industrialized nations have seen a more than 50% decrease in heart attack mortality since the 1960s, low- and middle-income countries—which include the majority of Asian countries—now account for 80% of all cardiovascular disease-related deaths worldwide.[9] In India, the prevalence of coronary heart disease has increased from 4% to 11% among urban populations during the last 50 years.[10] By 2010, the World Health Organization (WHO) predicts that Indians would account for 60% of all cardiac patients worldwide. In India, patients under the age of 70 account for nearly 50% of cardiovascular-related deaths, compared to 22% in the West.[11]The present study was conducted to assess hypertension among patients visiting general medicine department.

We found that out of 115 patients, 68 were males and 47 were females.We found that 27 subjects were normal, 30 had pre- hypertension, 25 had stage I and 33 had stage II hypertension. Mahmood SE et al[12]found out the prevalence of hypertension amongst the adult outdoor patients of an urban health centre. The prevalence of hypertension was found to be 44.46%. The proportion of hypertension showed an increasing trend with age. The mean systolic as well as diastolic blood pressure patterns were found to be higher, with an increase in age.

We found that mean SBP among males was 142.6 mm Hg and in females was 141.2 mm Hg. The mean DBP among females was 141.2 mm Hg and DBP was 90.6 mm Hg. Deshmukh PR et al[13]studied the prevalence, correlates of hypertension and level of awareness regarding hypertension in rural area of Wardha District of Central India.All the members aged 18 years and above from selected households were included in the study. Those who were absent on two repeated visits, pregnant mothers and those who were not able to stand erect were excluded from the study.The overall prevalence of hypertension was found to be 20.6%. The mean systolic blood pressure was 119.08 + 15.68 mm Hg and mean diastolic blood pressure was 76.85 + 17.82 mm Hg. Significant risk of hypertension was found with increased age, increase in BMI, waist-hip ratio and occupations involving sedentary work. The risk decreased significantly with increase in educational level. The level of awareness regarding hypertension was very poor. Only 13.6% of the hypertensive was aware of the condition while only 8.7% of the hypertensive was taking the treatment regularly.

We found that SES was upper class in 8, upper middle in 10, middle class in 12, lower middle in 24 and lower class in 32 patients. Mohan V et al[14]studied the prevalence, awareness and control of hypertension. Hypertension was present in 20% [men:23.2% vs. women:17.1%, $p<0.001$] of the study population. Isolated systolic hypertension (Systolic BP > or = 140 and Diastolic BP<90 mmHg) was present in 6.6% while isolated diastolic hypertension (DBP > or = 90 and SBP<140 mmHg) was present in 4.2% of the population. Among the elderly population (aged > or = 60 years), 25.2% had isolated systolic hypertension. Age, body mass index, smoking, serum cholesterol and triglycerides were found to be strongly associated with hypertension. Among the total hypertensive subjects, only 32.8% were aware of their blood pressure, of these, 70.8% were under treatment and 45.9% had their blood pressure under control.

The shortcoming of the study is small sample size.

CONCLUSION

It was discovered that a large percentage of the outside patients had hypertension. This study highlights the importance of early hypertension detection, which can be achieved through routine population screenings conducted both in hospitals and in the community.

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