

PREVALENCE OF HYPERTENSION IN FIVE RURAL AREAS OF PESHAWAR

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ABSTRACT

Objective: To assess the prevalence of hypertension in five rural areas of district Peshawar.

Material and Methods: This cross-sectional study with a sample size of 238 people covered in age group above 15 was conducted in five rural areas of district Peshawar. Blood pressure was measured manually. Subjects with systolic blood pressure more than 140 and diastolic blood pressure more than 90 mm of Hg and signs & symptoms of hypertension were considered as hypertensive. Data was collected using questionnaire.

Results: The prevalence rate of hypertension in the study population was 38.5%. Prevalence of hypertension was more in females than in males. Majority of the subjects has stage I and II hypertension.

Key words: Systolic Blood Pressure, Diastolic Blood Pressure, Hypertension, Prevalence, Coronary artery disease.

INTRODUCTION

Blood pressure means systolic and diastolic pressure measured in mm Hg, upper value is systolic and lower is diastolic. High blood pressure/ Hypertension is defined as systolic pressure above 140 and diastolic pressure above the level of 90 mm Hg¹. Hypertension is an important risk factor for cardiovascular diseases and has a high mortality rate². Prevalence of chronic diseases are expected to increase in coming years³. About 45 % of disease burden is attributable to non-communicable diseases in low and middle income countries worldwide⁴. High blood pressure is responsible for 7.5 million deaths and 12.8 % of all deaths worldwide. Hypertension contributes to high risk of stroke and coronary heart diseases^{5,6}. About 1 billion people worldwide is suffering from hypertension and is expected to raise to 1.56 billion by 2025. Similarly in Pakistan 18 % adults and 33 % of adults above the age of 45 years is hypertensive⁷. Only 50 % of population in Pakistan is diagnosed and only half of these are treated while only 12.5 % were adequately controlled⁸. In the past it was mistakenly thought that

hypertension is more prevalent in developed nations⁹. However, studies have shown that hypertension is common in developing countries³. Age adjusted prevalence of hypertension has decreased from 33 to 29 % and from 29 to 25 % in females¹⁰. In rural areas of Pakistan prevalence of hypertension is 12.5 % in men and 14.5 % in women¹¹. In Pakistan preventive programs are inadequate primary health care program need to address hypertension problems in people at risk¹².

The aim of this study is to determine hypertensive population in rural community of district Peshawar.

METHODS AND MATERIALS

A community-based cross-sectional survey was conducted in the villages of district Peshawar, Khyber Pakhtunkhwa. Five rural areas of district Peshawar were selected on the geographical map; Rural Health Centers (RHCs) of these villages were visited. The survey was conducted on all the subjects aging above 15 years present in RHCs during time of survey. An informed verbal consent was obtained before measuring the blood pressure. 238 subjects drawn equally from the five UCs constituted the study sample. Blood pressure was measured by auscultation, using the

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standardized sphygmomanometer. All the participants were requested to take rest for five minutes. Blood pressure was measured in the sitting posture with an appropriate-sized cuff encircling the arm. Two separate readings were taken at an interval of minimum three minutes. Cut off value for systolic BP was 140 mm Hg while for diastolic it was 90 mm Hg. History for sign and symptoms and medication was taken. Those who were on medication were excluded from the study.

Information so obtained was analysed using statistical tools SPSS V. 18.

RESULTS

Out of 238, 92% were hypertensive given the prevalence ratio of 38.65%. Details is given in Table-1.

Out of hypertensive subjects 56 were female while 36 were males. Details is given in Table-2.

DISCUSSION

Hypertension is considered as the major risk factor for the development of cardiovascular diseases and stroke worldwide. However, hypertension is a silent

killer as people remain unaware of their high BP as evident in our study and some international studies¹³. Although those subjects who were on medication were excluded from the study but their BP was checked for control. Even in the presence of efficacious antihypertensive medication, high blood pressure remains uncontrolled in most of the cases in our study. In our study prevalence of hypertension in rural areas of Pakistan was 38 % with female predominance which is compatible with international results⁶. Studies indicate that control rates vary according to various countries and geographic regions¹⁴. Even though, the rate of awareness towards hypertension is quite prominent from 62% in Australia to 72% in US, the control rates are quite discouraging as with to 24% and 35% respectively¹⁵. In the South Asian region, the scenario is more threatening as China reported only 8% control rates and India with 6% in management of hypertension¹⁶. At present, it is estimated that about 1 billion people worldwide have hypertension (>140/90 mmHg), and this number is expected to increase to 1.56 billion by 2025. A similar scenario is seen in Pakistan. People tend to ignore the health risks involved with this harmful disease, where many are unaware². According to National Health Survey of Pakistan (NHSP) more than 70 percent of all hypertensive patients in the country are unaware of their disease. On the other hand, general physicians tend to under diagnose and under treat high blood pressure⁷. The National Health Survey of Pakistan estimated that hypertension affects 18% of adults and 33% of adults above 45 years old. In another report, it was shown that 18% of people in Pakistan suffer from hypertension with every third person over the age of 40 becoming increasingly vulnerable to a wide range of diseases. It was also mentioned that only 50% of the people with hypertension were diagnosed and that only half of those diagnosed were ever treated. Thus, only 12.5% of hypertension cases were adequately controlled. In our study the scenario was not much different from other areas of Pakistan. The prevalence was higher in rural areas of Peshawar, KPK (38%) with more prevalence in people above 40 years of age. Attributing factors of such high prevalence were lack of education. Sedentary lifestyles, poor health facilities, lack of exercise and nutritional factors like obesity and fatty meals.

Table-1: different grade of blood pressure.

Groups	BP level (mmHg)		
		n	%
Normal	Sys. BP <120	70	29.41
	Dia. BP <80		
Pre-Hypertensive	Sys. BP 120-139	73	30.67
	Dia. BP 80-89		
Hypertension Stage-I	Sys. BP 140-159	52	21.85
	Dia. BP 90-99		
Hypertension Stage-II	Sys. BP 160<	40	16.81
	Dia. BP 100<		
Hypotension	Sys. BP <90	3	1.26
	Dia. BP <60		
Total		238	100

Table-2: Gender distribution of Hypertensive subjects

	Male		Female	
	n	%	n	%
Stage I	20	21.74	32	34.78
Stage II	16	17.39	24	26.08
Total	36	39.13	56	60.87

CONCLUSIONS

Hypertension is the commonest risk factor for cardiovascular and stroke. Although prevalence of hypertension in general public is very high but major bulk is undiagnosed. A screening and preventive program needs to be established on national and international level.

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