PREVALENCE OF HYPERTENSION IN ADULT POPULATION OF HAYATABAD PESHAWAR

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ABSTRACT

BACKGROUND: Hypertension is one of the common non communicable disease and is reported to be prevalent in 20% to 50% of the adult population, hypertension is one of the major contributor of mortality and morbidity in developing and developed countries. The cross-sectional descriptive study was formulated to find the prevalence and to assess different etiological factors of hypertension.

MATERIAL & METHODS: This cross-sectional study among 400 adults of age 25–75 years was conducted in months of June to December 2014 in Phase 5, Hayatabad Peshawar. A detailed structured proforma having important questions was used to collect important data regarding various variables.

RESULTS: Our study results showed that 22.75% of the study people were hypertensive i.e. 10.25% of males and 12.5% of females; and the prevalence of hypertension showed positive association with advancing age. Out of all respondents; 60.25% were males while 39.75% were females; 28.5% were smokers; 5.25% consume predominantly meat; 32.5% were obese & overweight; 36.75% checked their B.P regularly; and 19.75% had positive history of hypertension in family.

CONCLUSION: We conclude that hypertension prevalence was high among our study population and was associated with various modifiable and non modifiable risk factors thus population based preventive strategies are needed to control and prevent hypertension.

KEY WORDS: Hypertension, Age, Diet, Smokers, Hayatabad, Peshawar.

INTRODUCTION

Hypertension (HTN) is being reported as the most common risk factor for different cardiovascular diseases (CVD)¹. Recognized as silent killer, the HTN has been reported as a non-communicable disease all around the globe due to its high mortality rates and lack of early symptoms². Approximately hypertensive consists of quarter population of the whole world and is expected that this prevalence will rise in near future If not adequately controlled. In most of the third world countries the prevalence is about 20% compared to 37% in the developed countries³.

Since the developing countries are passing through an era of economic improvement, urbanization, epidemiological transitions and longer life expectancies, the prevalence of HTN

is also growing rapidly⁴. “Kearney et al” expected that in year 2025, the people with HTN in the third world countries will be around 1.17 billion, and thus will constitute three-fourths of hypertensive individuals throughout the globe⁵.

HTN is the most common and important non communicable disease which affects the old aged people mainly. Its prevalence is increasing day by day in Europe and USA; and is presumed to be a major contributor to unnecessary deaths and disability in the poor third countries as well as in the highly economically stable nations⁶.

Hypertension showed strong association with socioeconomic status and approximately half of the aged population in the developing and developed countries are affected by it⁷. In a study conducted among adults groups of males and

females in Geneva showed 40% and 25% high blood pressure respectively. These prevalence rates were more as were revealed in studies of USA and were in consistent prevalence among European people^{8,9}. Whereas in a study reported by Wolf Maier et al., the prevalence of HTN was nearly 27% in USA and 42% in several European populations¹⁰.

High Blood Pressure is known to be associated with various heart conditions and causes many systemic complications. Blood Pressure is said to be in limits if the systolic levels less than 140 mm Hg and diastolic less than 90 mm Hg¹¹. The hypertension rates varied from 10% to 65% across studies. Many studies revealed difference in prevalence of hypertension on gender basis and reported approximately 7% to 44% in various sexes. Moreover in other study, the high blood pressure showed variations between 9% to 49% among different genders⁶.

Hypertension is considered as one of the important global challenge and third cause of mortality and morbidity. The blood pressure is considered normal if showed less variations around 120 systolic and 80 diastolic blood pressure and any values which showed more than this standard value for more than one reading was termed as high⁸. High blood pressure was mostly found in people of over 40 years of age and affects approximately more than half of the people in developing and developed world. The prevalence rate of high blood pressure was 56% in males and 59.8% in females¹².

Pakistan is a third world country, and comprising of high burden of communicable and non-communicable diseases and thus poses great risk to economy and development of the country. The incidence and prevalence along with the complications of hypertension is mounting day by day due to various direct and indirect determinants which affect the quality and standard of life. In Pakistan, there are numerous conditions which pose individuals and community to these etiological factors and thus this problem is on rise. In order to effectively

and adequately, control this menace, this descriptive study was carried out to find the prevalence and to correlate it with different etiological factors among the individuals of Phase-5 Hayatabad, Peshawar.

METHODOLOGY

This cross-sectional study among 400 adults of age 25–75 years was conducted between June to December 2014 in Phase 5, Hayatabad Peshawar. All individuals working in phase five hayatabad were selected having more than 2 years of job, while those having less than 2 years and were not permanent residents of hayatabad were excluded from the study. Sample size of 400 was selected with 95% CI and with 50 % prevalence of hypertension among the community. A detailed structured proforma having important questions was used to collect important data regarding various variables. An individual is hypertensive if the blood pressure is above 140/ 90 mmHg on assessment. Microsoft Word and SPSS helped was used for data analysis and then data was presented in form of tables.

RESULTS

The prevalence of hypertension in the study population was shown in Table No 1.

TABLE NO 1. PREVALENCE OF HYPERTENSION AMONG ADULT POPULATION (N=400) OF HAYATABAD PESHAWAR

BP Findings	Frequency	Percentage (%)
Normotensive	309	77.25
Hypertensive	91	22.75
Total	400	100

Our study results showed that 60.25% (n=241) were males while 39.75% (n=159) were females, 12% (n=48) were below age 30 years, 20.25% (n=81) were in the group 30-40 years, 35.5% (n=142) of the subjects were of age group 40-50 years, 27% (n=108) were in the age group 50-60 years, while 5.25% (n=21) were above age 60 years as were shown in Table No 2.

TABLE No 2. RELATIONSHIP OF HYPERTENSION WITH AGE GROUPS AMONG ADULT POPULATION (N=400) OF HAYATABAD PESHAWAR

Age Group	HTN	No HTN	Frequency (%)
Less than 30	5 (1.25%)	53 (13.25%)	58 (14.5%)
30 – 40	9 (2.25%)	73 (18.25%)	82 (20.5%)
40 – 50	28 (7%)	102 (25.5%)	130 (32.50%)
50 – 60	34 (8.5%)	71 (17.75%)	105 (26.25%)
More than 60	15 (3.75%)	10 (2.5%)	25 (6.25%)
Total	91 (22.75%)	309 (77.25%)	400

Our study results showed that 28.25% (n=114) of the subjects were smokers; 81.75% (n=327) consumed mixed diet of meat and vegetables, 15% (n=60) vegetable and fruits while 3.25% (n=13) ate predominantly meat; 35.75% (n=143) had active lifestyle; 36.75% (n=147) of the respondents check B.P measurement regularly; 19.75% (n=79) had positive history of hypertension in family while the remaining 80.25% (n=321) had no significant family history. The relationship of hypertension with gender among the study population (n=400) is shown in Tables No 3.

TABLE No 3. RELATIONSHIP OF HYPERTENSION WITH GENDER AMONG ADULT POPULATION (N=400) OF HAYATABAD PESHAWAR

Gender	Hypertensive	Normal	Total
Male	41 (10.25%)	200 (50%)	241 (60.25%)
Female	50 (12.5%)	109 (27.25%)	159 (39.75%)
Total	91 (22.75%)	309 (77.25%)	400

DISCUSSION

In our study the prevalence of hypertension was 22.75% (n=91) while according to various International research findings, the prevalence

was 17.7%, and 42.7%. Thus our study results were higher as compared to studies published having 2.5%¹³, 22%¹⁴, and 17.7%¹⁵ respectfully. Moreover our study results had less prevalence as compared to international studies, which had 42.7%¹⁶ and 29.05%¹⁷.

Our research results showed that the prevalence of hypertension more in individuals with age more than 40 years and was calculated as 84.61% (n=77) as compared to young ages as were confirmed and supported by different international and national studies. In our study several etiological determinants showed strong significant association with hypertension but advancing age revealed strong positive correlation as were supported and revealed by our study findings^{15, 18}.

Many research studies, revealed that hypertension incidence and prevalence was more among males as compared to females up to 40 years of age where it showed same prevalence⁶. Interestingly our results showed that; out of 241 males, 10.25% were hypertensive while among 159 females, 12.5% were hypertensive and thus rejected many international studies which supported that prevalence among males was more as compared to females (males 34%; and females 24%) and thus revealed that there was no significant difference in prevalence of hypertension among different sexes^{15,18,19}. Moreover, in another research study it showed 13.87% among men and 6.54% among women²⁰.

The hypertension showed strongly positive relationship with advancing age, positive smoking history, highly caloric diet consumption, inactive lifestyle activities, and BMI more than 25 as were supported and confirmed in different national and international studies^{12,15,18}; which was supported and revealed in our study findings.

CONCLUSIONS

From our study results it was concluded that hypertension prevalence was high in the studied population and thus population based primary preventive strategies are of utmost importance to

diagnose, adequately manage and control hypertension. Moreover, there is urgent need of health promotion and public health education measures to prevent hypertension so to avoid morbidity and mortality.

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