

Prevalence of hypertension in a mixed community

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ABSTRACT

Objective: This study was carried out to ascertain the prevalence of hypertension in our community with a view to forming a baseline and planning strategies for prevention and control.

Methods: A cross sectional study carried out by collecting data from randomly selected case notes of 3747 patients (1683 males and 2064 females), regarding age, sex, blood pressure measurements and whether or not they were on treatment for hypertension.

Results: The prevalence of hypertension in the total population was 3.1% (females 3.05% and males 2.67%).

With regard to age group, the prevalence was highest in 65-74 years in both males and females.

Conclusions: There is a need for health education among our patients regarding the nature of hypertension and the relation between life style and hypertensive disease.

Keywords: Hypertension, prevalence, community.

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Hypertension (HTN) is one of the most common indications for lifelong treatment and there is incontrovertible evidence to show that such treatment substantially reduces the risk of stroke (cerebrovascular accidents [CVA]) and coronary artery disease.¹⁻⁴ Each year, in the United Kingdom, about 100,000 people have their first stroke and 64,000 die as a result.⁵ It is one of the most common causes of heart failure among the elderly. Evidence showed that cardiovascular diseases are responsible for about 33% of all hospital admissions in the elderly.⁶ It is therefore evidently proved that it is vital to know the degree of the problem of HTN in any community. There have been many studies carried out on the prevalence of HTN in other communities, but from our literature search there are very few in ours which is a mixed urban/rural community. The objective of this study is to find out the age/sex prevalence of HTN in this community using the

World Health Organization guidelines as criteria (140/90 mmHg) for diagnosis. We believe that this study will focus attention on this 'silent killer' arousing awareness of health care workers for surveillance and opportunistic intervention and will provide a baseline for future studies.

Methods. We conducted a cross-sectional retrospective study by collecting the data from medical records of primary care patients of Alkharj Military Hospital, Saudi Arabia. This hospital is covering a mixed urban/rural population of about 100,000. The Statistician advised that data from 1500 patients would be enough assuming that prevalence would be less than 5% as in most countries of the world. The case notes in the medical records library are arranged in cabinets with 6 or 7 shelves in each cabinet. Every shelf contains about 100 case notes.

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The Statistician advised that for random sampling we should take case notes in the 1st, 25th, 50th, 75th, and 100th position in each shelf. Therefore data was collected for 3747 patients (male and female). Patients were divided in age groups of 0-17 years, 18-34 years, 35-64 years, 65-74 years and 75 years and above. In our primary care clinics the doctor usually records blood pressure. Systolic blood pressure is taken when the first kottokoff (K1) sound is heard (two consecutive beats) and diastolic blood pressure is recorded at the disappearance of the last beat (K5). Blood pressure is recorded by a standard sphygmomanometer and the reading closest to an even number is recorded. The last 3 blood pressure readings each 3 months apart were taken from case notes and their average was taken for calculating the prevalence of systolic diastolic hypertension (SDH). Only the patients already diagnosed as having SDH were used for calculating the prevalence. Microsoft Excel was used for data entry and analysis. The total numbers of male and female patients, their distribution according to age groups and total number of patients with SDH were recorded.

Results. There were 3747 patients of which 1683 (45%) were males and 2064 (55%) were females. Mean age for male patients was 24.63 years, for females were 23.76 years and for both age groups' 24.19 years. Total number of hypertensive patients was 108 (3.10%) in which 45 (2.67%) were males and 63 (3.05%) were females. Among our patients 34 years and below only 6 (0.22%) were hypertensive but in those 35 years and above 102 patients (10.3%) were hypertensive. Females showed a higher prevalence of HTN than males. The prevalence of HTN in males and females according to age subgroups is shown in Table 1.

Discussion. Hypertension is one of the most common factors associated with myocardial

infarction (MI) and stroke. Studies have shown that if the condition is detected and managed properly the mortality and morbidity associated with HTN can be considerably reduced.¹⁻⁷ Unfortunately many hypertensives, even among health care workers go undetected. Among our patients 34 years and below only 6 (0.22%) were hypertensive but in those 35 years and above 102 patients (10.3%) were hypertensive. This prevalence is similar to findings in other societies⁸ and like other communities, the actual prevalence of HTN may be higher bearing in mind the rule of halves.⁹ Prevalence studies had shown that more than 50% of all people above 60 years have HTN or isolated systolic HTN.¹⁰ A study of 50 and 60 years old patients attending primary health care centers in Medina, Saudi Arabia had shown a HTN prevalence of 15% in females, 7% in males and 10% in the total population, while taking a blood pressure of 160/90 mmHg as cut off point.¹¹ Other studies in Saudi Arabia, by Mahfouz and Al-Erian in Asir region among male and female patients of 45 years and above, showed a prevalence of 2%¹² as compared to the second study of Nazim Uddin showing a prevalence of 15% (Diastolic blood pressure 90 mmHg) for persons 18 years and above.¹³ The much higher prevalence of HTN in females in the age group of 65-74 years (29.68%) and above 75 years (30.3%) as compared to males (19.67% and 17.02%) in this community may be associated with various life style factors, low literacy rate, diet, lack of exercise, high fertility and overweight which has been documented in other studies.¹⁴ As shown by the previous studies, emphasis should be given to the life style changes including weight reduction, increased exercise, healthy dietary habits, and quitting smoking not only for hypertensives but also for the general population. Health care staff should be aware of the advantages of opportunistic screening for HTN. Patients should be included in the management of their HTN and should know fully the risks and

Table 1 - Showing total number and prevalence of male and female hypertensive patients in different age groups and in the total population.

Age groups	Male			Female		
	Total Number	Hypertension	Prevalence	Total Number	Hypertension	Prevalence
0-17 years	813	0	0	921	0	0
18-34 years	424	3	0.71%	599	3	0.50%
35-64 years	338	22	6.51%	447	31	6.94%
65-74 years	61	12	19.67%	64	19	29.68%
75 years and above	47	8	17.02%	33	10	30.30%
TOTAL	1683	45	2.67%	2064	63	3.05%
Total number of hypertensive patients = 108 and prevalence = 3.10%						

benefits of controlling HTN. There is an urgent need for recognition of HTN as one of the major health problems.

In conclusion, this study shows a high prevalence of HTN requiring medication in Saudi Arabia, as in all over the world. As the majority of the population is under 34 years of age there are chances that poor eating habits along with lack of exercise and sedentary life style due to cultural norms and modern technology automobiles will increase the number of hypertensives requiring treatment in the near future. To overcome this problem it is necessary that recommendations for detection and management of HTN in New British Hypertension Society guidelines should be implemented and followed up by regular periodical audit.¹⁶

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