

Prospective Study on The Prevalence of Hypertension among the Patients who Attend Internal Medicine Outpatient Clinic of a Local Hospital in Makkah

Wafaa M. Alshehri¹, Abdullah Hawsawi¹, Fayza AlGhamdi²

¹Department of Internal Medicine King Faisal Hospital, Makkah, Saudi Arabia

²Family Physician, Primary Health Care Center, Jeddah, Saudi Arabia

Abstract: Hypertension is a common global health problem in many countries including developing countries. The objective of this study was to determine the prevalence of hypertension among the patients who attend internal medicine outpatient clinics in a local hospital and highlight the common medical conditions associated with it.

Keywords: Prevalence, Hypertension, Risk Factors, Diabetes.

I. INTRODUCTION

Hypertension which is defined as a systolic blood pressure (SBP) of 140 mm Hg or more or a diastolic blood pressure (DBP) of 90 mm Hg or more, taking antihypertensive medication, or having been told by clinicians on at least 2 occasions as having hypertension. Hypertension is one of the most common worldwide diseases afflicting humans and is a major risk factor for stroke, myocardial infarction, vascular disease, and chronic kidney disease[1]. It has a huge impact on the health of communities. It is widespread in the Arabian Gulf area, middle East region, and the whole world. In the year 2025, it is expected that it may affect about 1.56 billion people worldwide. The prevalence of HTN is increasing in developing countries and is one of the leading causes of death and disability. The prevalence of HTN increases with age. The results of descriptive studies showed that death from ischemic heart disease and stroke increased linearly in those with a systolic blood pressure (SBP) level as low as 115 mmHg and a diastolic BP (DBP) level of 75 mm Hg. According to one study, the awareness of HTN among general population varied from 25.2% to 75%. The World Health Organization reported that annually, complications of HTN accounted for 9.4 million deaths worldwide. This study was conducted to assess the prevalence of HTN and associated factors in a local hospital in Makkah.

II. MATERIALS AND METHODS

The main objective of this study to find out Prevalence of hypertension among the patients who attend internal medicine outpatient clinics in a local hospital. Another objective is to find out the association between hypertension and other medical conditions in those patients and whether there is history of hypertension or other disease among the family members. The study was prospective in its design and it was carried out in the internal medicine outpatient clinic in the local hospital from 1 March 2018 till 30 April 2018. Inclusion criteria for selection of patients was all the patient who attend the internal medicine outpatient clinic. Exclusion criteria was any patient who denied to measure Blood pressure, non cooperative, those who are less than 18 year old, pregnant ladies and those on steroids. HTN was defined if SBP was 140 mmHg and above or DBP 90 mmHg, and above or upon self-report of a medical diagnosis of HTN or current treatment for HTN with prescription medication. Blood pressure was classified according to the Seventh Joint National Committee criteria. Pre-HTN was defined as BP above 120/80 mmHg but <140/90 mmHg. For the previously diagnosed hypertensives, blood pressure of <140/90 mmHg was considered as controlled HTN while uncontrolled HTN was defined

as any value greater than this [2]. blood pressure was measured by using an Accoson mercury sphygmomanometer with an appropriate cuff size and a Littman stethoscope (3M, Brookings). Blood pressure was measured in the right arm after at least 15 min of rest and while participants were sitting down. The cuff (about 12.5 cm wide) was applied evenly and snugly around the bare arm, with the lower edge 2.5 cm above the antecubital fossa. The participants must not have eaten, ingested alcoholic drinks, or smoked tobacco for at least 30 min before the measurements. The first and fifth Korotkoff sounds were taken as the systolic blood pressure (SBP) and diastolic blood pressures (DBP) respectively. The mean of two separate readings was determined after an interval of 10 min and recorded to the nearest 2 mm.

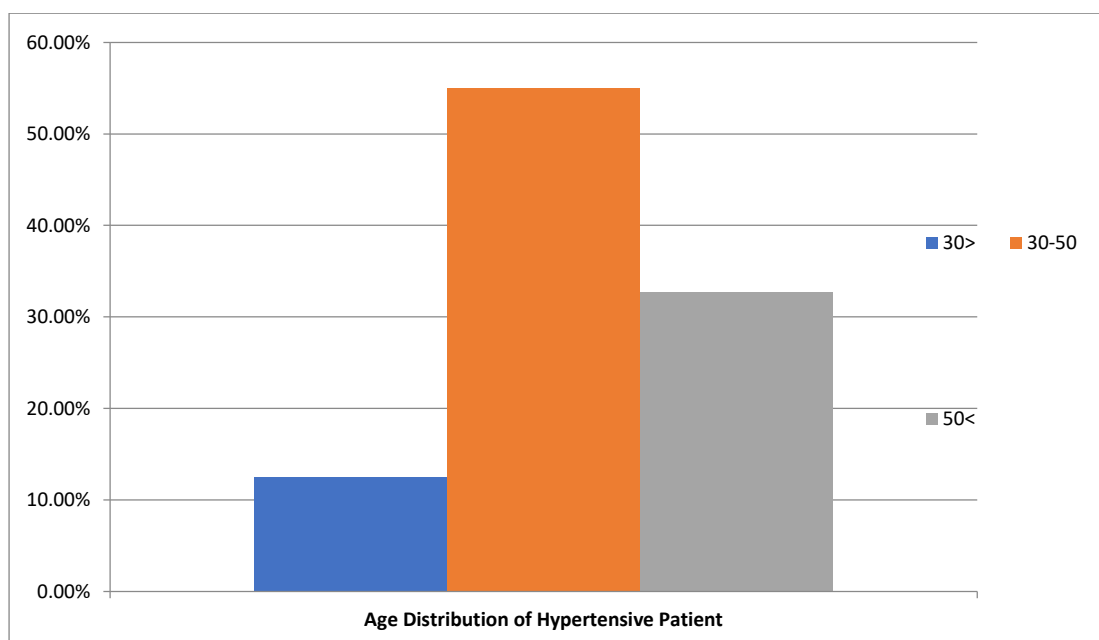
III. RESULTS

Study was carried out on 1218 patients; of them 765 were hypertensive (62.8 % of total sample patients) with male predominance of 500 patients (65.3%) and female hypertensive patients were 265 (34.7%) [Table 1]. Out of the 765 patients 420 (55%) were within the age group 30-50 years, 95 (12.5%) patients were below 30 years of age while 250 (32.7%) were above 50 years old [Chart1]. .Hypertensive patients were have history of some associated medical conditions including 425 patients with diabetes (55.6%) , ischemic heart disease in 94 patients (12.3%) , stroke in 73 patients (9.5%) and chronic kidney disease in 102(13.3%) while other diseases account only for 9.3% (71) patients[Chart 2].

Table1: Number of hypertensive patient

Sex	No. of Sample patient	Percentage (%)	Hypertensive patient	Percentage (%)
Male	713	58.5%	500	65.3%
Female	505	41.5%	265	34.7%
Total	1218	Total	765	62.8% of total sample

Chart1

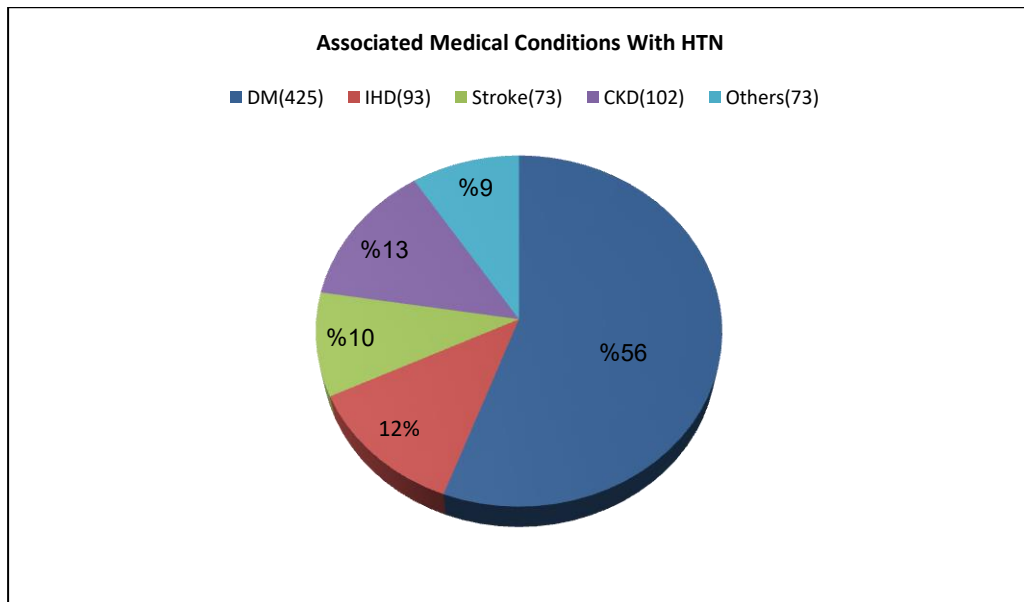


IV. DISCUSSION

After proper measurement of BP of 1218 patients, hypertension was found in 765 patient (62.8%), of them 500 were male (65.3%) and 265 were female (34.7%). So, Prevalence of hypertension among the patient who attend internal medicine outpatient clinic in local hospital is about 62.8% with male predominance. Among patients, 38 patients only (5%) were newly diagnosed and 727 patients (95%) were already diagnosed hypertensive patient all of them were taking regular anti hypertensive medication .Significant number the already diagnosed hypertensive patients, 640 patients (88%) have BP controlled and only 87 (12%) having uncontrolled BP. So most of the already diagnosed hypertensive patients they

adequately control their blood pressure. In our study 420 of the hypertensive patient are between the group of 30-50 years (55%) and 250 patients were more than 50 years old . While younger patients less than 30 years old account for 12.5% (95 patients) [Chart 1] . Hypertensive patients are associated with different medical conditions like Diabetes Mellitus (DM), Stroke, ischemic heart disease , chronic kidney disease (CKD), and others like Hypothyroidism, COPD etc. In our study, Diabetes is most prevalent associated medical condition 425 (55.6%), next associated medical conditions are CKD 102 (13.3%) , IHD 94 (12.3%) ,stroke 73 (9.5%) and others in 71 patients (9.2%) [Chart 2].

Chart 2



V. CONCLUSION

From this study we concluded that the prevalence of hypertension among the patients who attend internal medicine outpatient clinic in local hospital is 62.8 % with male predominance. Although this data may not exactly reflect the actual Prevalence of hypertension as it is outpatient hospital based, but give an idea about the Prevalence of hypertension among the patient who attend for treatment in a local hospital. So a community based screening programs for Hypertension and its risk factors need to be carried out.

REFERENCES

- [1] Benjamin EJ, Blaha MJ, Chiuve SE, et al, for the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics-2017 update: a report from the American Heart Association. *Circulation*. 2017 Mar 7. 135 (10):e146-e603. [Medline].
- [2] Chobanian AV, Bakris GL, Black HR, Cushman WC, Green LA, Izzo JL Jr, et al. The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure: The JNC 7 report. *JAMA* 2003;289:2560-72
- [3] Gordon H. Williams. Hypertensive Vascular Disease. In: Harrison's Principles of Internal Medicine, 15th edn. New York: McGraw – Hil, 2001: 1414.