Prevalence, Awareness and Control of Hypertension among Patients Attending Azadi Teaching Hospital in Kirkuk.

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Abstract:

Background: Hypertension is a major health abnormality affecting around (20%) of the adult populations in more country. Mortality from vascular events like stroke and ischemic heart disease double with increases in the systolic blood pressure or increases in diastolic blood pressure. Diagnosis of hypertension and control of blood pressure are highly important for decreasing the risk of cardiac attacks and vascular events like strokes. We studied the prevalence, awareness, and control of hypertension in attendance of medical consultation room in Azadi Teaching Hospital in the period from 2013-2015.

Objective: To determine: (1). Prevalence, awareness and control of hypertension in adult population attended Azadi Teaching Hospital in Kirkuk.

(2). The proportions of treated patients, controlled, and uncontrolled HTN.

Patient and methods: Across-sectional point prevalence study. A total of 2351 unselected medical consultation clinic attendance; Blood pressure information on 2351 individuals (in 2013-2015) aged ≥18 years was studied. Hypertension was defined as BP ≥140/90 mm Hg or patients on antihypertensive medications. Prevalence of hypertension based on clinical diagnosis, self- diagnosis, and (BP) measurements.

***Results*:** A total of (41%) of all patients were diagnosed as having hypertension (BP levels ≥ 140/90 mmHg and/ or present with antihypertensive medications use). Fifty nine percent of hypertensive patients were on antihypertensive medications, (21%) of which was quietly controlled (BP < 140/90 mmHg). Among those ≥65 age groups, the awareness, treatment, and control rates of hypertention have increased significantly (P≤0.01).

Conclusions: Prevalence of HTN is high in Kirkuk population. The proportions of attendance who received medications remained low, and BP control was bad among HTN patients. These findings indicate that increase in improvement of management and controlling of HTN among our population seriously needed.

***Keywords*:** Kirkuk population, Hypertension, Prevalence, Blood pressure control.

Introduction:

Hypertension (HTN) is worldwide problems and main risk factors for cardiovascular diseases (CVD) [(1)]. Mortality from vascular events like stroke and ischemic heart disease (IHD) double with each (20 mmHg) increases in the systolic BP (SBP) from level 115 mmHg, and with each 10 mmHg increases in diastolic BP (DBP) from levels as low as 75 mmHg and

Satisfaction in the awareness, treatment and control of HTN is important to reduce associated mortalities and morbidities [(2)].

In NHANES study done in 1999–2000, (28.7%) of people has HTN. A total of (68.9%) of people with HTN was aware of diagnosis, (58.4%) took treatment, and only in (31.0%) of patients BP was controlled [(3)].

Clear cut definitions of HTN and HTN control are essential to guiding diagnosis, treatment, and surveillances to follow up the progress toward HTN objective. HTN is define by clinical as (SBP 140 mmHg) or more or DBP 90 mmHg or more this reading average over the two or more reading results on two or greater checking following an initial detections [4].

Hypertension is a major health abnormality affecting around (20%) of the adult populations in more countries. Famous clinical trial in HTN patients showed the blood pressure BP control is essential in decreasing vascular events and CVD [5, 6, 7].

A small decreasing in BP can reduce the risks of heart attacks and heart failure, stroke, and IHD markedly [8, 9, 10].

Confirming a diagnosis of HTN give the health worker the priority to evaluate absolute CVD risk, keeping in minds target-organ damages and other vascular events risk factor associate with HTN. It is quietly recommend that the cardiovascular events risk must be assessed in individual before deciding a decision about the HTN managements [11].

This survey was conducted to measuring the percentage and prevalence of patients with HTN, treated HTN, and controlled patients using data collected over 2 year of consultation clinic in azadi Teaching Hospital.

Method:

This survey had been conducted to measure the percentage and prevalence of individuals with HTN, treated HTN and individuals with controlled HTN. Data was collected over 2 year in Azadi Teaching Hospital medical consultation clinic. We utilized the same sort of mercury-sphygmomanometers, adulated with pneumatic cuff of difference size. Three consecutive BP results were measured and the last two readings were reported. We start to carry out our survey over a time of 2 years period on all attendance > 18 years of age who had visit medical consultation offices in Azadi Teaching Hospital.

Structured interview had been conducted with every patient. Three times sitting measurement of (BP) were taken for every patient, 5 minutes periods after resting and 30 min periods after the smoking, on the individuals left arms, with a 2-minutes period interval in between the measurements (using Korotkoff phases V for the DBP) [11].

Hypertension in our study is defined by using the depending criteria of (JNC) V-I6 (SBP ≥ 140 mm Hg and or DBP ≥ 90 mm Hg or present medications with antihypertensive treatments). Treated cases of HTN define as currents uses of antihypertensive drugs as detected by reviews of all treatments taken by the patients [12]. And the definition of HTN control is utilized when SBP is < 140 mmHg and DBP is < 90 mmHg by using of treatment or by lifestyle modifications or other pharmacological ordered [12].

Some well known guideline in the world advice that the best treatment goals for patients with diabetes mellitus and patients chronic kidney disease in order to decrease complications as SBP should be < 130 mmHg and the DBP should be < 80 mmHg [12, 13, 14, 15].

Statistical analysis:

A chi-square test and one-way ANOVA was used to examine the different in the category and the continuous variables, *p*. value <0.05 was considered statistically significant. The routine, recorded data analysis had been

approved by the Ethic Committee in Kirkuk College of Medicine.

Results:

The prevalence of hypertension

A total of 2351 patients, with a mean age of 48.6 years, were included in these 2 year period of medical consultation survey. Sex distributions was 1410(60%) women and 941(40%) men, prevalence of HTN was more in male 451(48%) than female 513 (36%) with p. value< 0.5 table (1).

Based on the diagnostic criteria which had been mentioned above ,among 2351 patients, (59%) 1387 of them were normotensives, while 964 patients were hypertensive, (41%), of whom 492 of them were without using treatments (51%) and 472 of them were using antihypertensive medications (49%), figure (1).

The prevalence of HTN had been increased with increase the age from (8%) (No. 77 patients) (18 to 34 years of age) to (49%) (No.474 patients) (> 80 years of age) and 30(284) % for those 50–64 years old table (2).

In our population group, BP was quietly appearing as a function of the age, p value for the liner trend test: <0.001).

Among those with evidence of HTN (No. 523) patients (54%) have or had a medical diagnosis (awareness) of the condition. While (No.441) patients were unaware of HTN, figure (2).

In the group of the elderly patient (≥ 65 years of age), HTN patients were mostly taking medications (n = 241{51%}) than in the younger individual patients group (n = 231{49%}). But statistically was not significant p. value > 0.5.

In the overall hypertensive treated group of population (472), only 99 patients (21%) of the treated hypertensive patients had an optimal control of their BP (< 140/90 mm Hg), figure (3).

Table (1): Prevalence of hypertension in 2351 patients attended out patient clinic.

Sex	Total No.	No. of hypertensive patients	Prevalence rate%	P. value
Females	1410	513	36%	<0.001
Males	941	451	48%	
TOTAL	2351	964	41%	

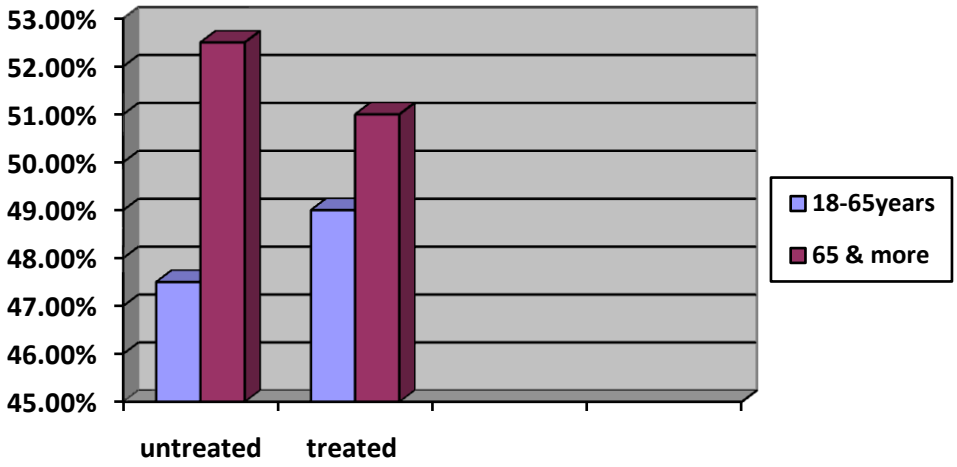

Figure (1): Prevalence of treated patient according to age.

Table (2): Prevalence of hypertension according to age (hypertension cutoff point: BP > 140/90 mm Hg). In 964 patients.

Age group in years	No. of Hypertensive patients	Percentage %	P.value
18-34	77	(8%)	<0.05
35-49	129	(13%)	<0.05
50-64	284	(30%)	<0.05
65 and more	474	(49 %)	<0.05
Total No.	964		

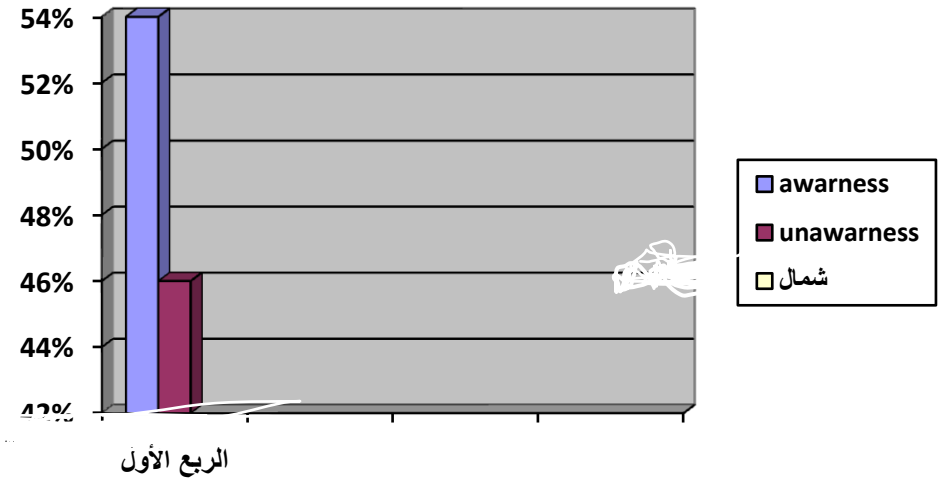

Figure (2): Awareness of hypertensive patients toward the diagnosis of hypertension.

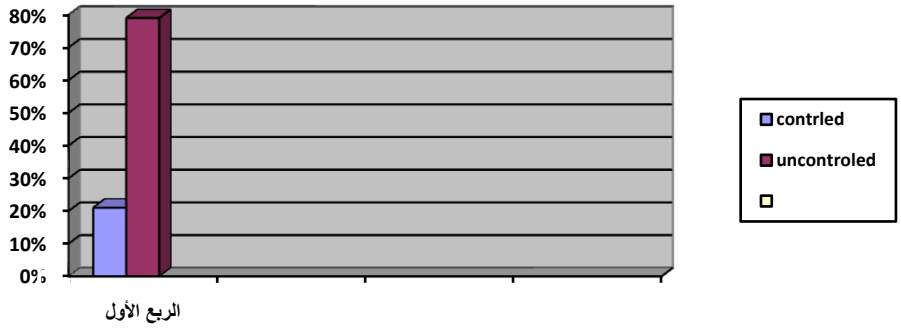

Figure (3): Prevalence of control of BP.

Discussion:

Hypertension is a major health abnormality affecting around (20%) of the adult populations in many country (5).

In this study we found that the prevalence of HTN is high in our society and it increases with age, while regarding the gender it was more in male (48%) than female (36%) with p< 0.05 table (1).

These results are consistent with kasper et al [16] that the prevelence of HTN increases with age Change from (15.2%) of 18-24 years old to (60.2%) of 65-74 years old.

This study confirms the result of high prevalence of hypertensive patients (41%) in population attended medical consultation of Azadi Teaching Hospital and our results was consistant and confirms previous studies by Cheung BM, et al. Ostchega Y et al. and Chobanian AV et al [18, 19, 20].

The study showed that the control rate of HTN according to guide lines occurred in only 99 patients out of 472 managed patients (21%) that they have an acceptable BP control, figure (3). This result is because of either lack of regular checking and follow up, or noncompliance, bad quality of drugs, or costy drugs or due to inappropriate management and this result was consistence with Philip D. Sloane et al. (17) that only (54%) of all HTN patients are aware of their diagnosis and only (11%) had been treated properly. However, this result cannot be applied to the Iraqi population as it does not take into account patients with poor socioeconomic who escape medications.

In a country with a high risk of CVD like united states of America, showed better HTN control results, about (29%) of all people with HTN found an optimal BP control at the 140/90 mm Hg threshold this difference may be because of methodological difference, and the results also cannot be compare further [(11)]. While In the French survey, the seventh report on prevention and treatment of hyprtention, only a few patients (24%) achieved an optimal control (BP < 140/90 mm Hg) and it was consistence with our study and many of them were untreated [(12)].

Awareness and control rate of HTN is lower in Kirkuk figure (2, 3) than in other developed west countries 18 making prevention of HTN a serious public health problem in our country. This is due to the WHO treatment strategies recommendation for HTN are not completely put into practice. A more combination treatment uses should be suggested 21.

Nevertheless, our study has limitations. First, this is a study of cross-sectional study data, so this study cannot be regarded as a cause-effect relationship between postulate factor and uncontrolled BP., Second, the study is defecet in some informations, such as the exact time of diagnosis, duration of management, and sociaoeconomic status of patients, such as family income, that may be associated with HTN control rate. Third is the limitation of sample size for each 2-year period make difficult to study interactions between factors such as ages, sexes, and races and/ ethnicity. As a result, generalization of these findings from this study to other populations in Iraq should be handling with caution.

Conclusions and recommendation:

The prevalence of hypertension was high in Kirkuk population attending Azadi Teaching Hospital. The proportion of individuals who received treatment remained low, and blood pressure control was poor among hypertensive patients. These results indicate that improvement of the ability to manage and control hypertension among our population is urgently needed. Public health measures and intensified antihypertensive treatment seem to be effective in improving BP control rates.

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