

Case report**Investigation of Demographic Characteristics of Essential Hypertension Patients Admitted to Cumhuriyet University Health Services Practice and Research Hospital****GÜRCAN SOLMAZ**

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Abstract.

Introduction: Hypertension is an important health problem that causes many problems such as early mortality, decreased quality of life and increased health expenditures. Hypertension causes serious organ damage if treatment is not successful due to the clinical picture it creates. When the demographic characteristics of hypertensive individuals are examined, it is seen that blood pressure is affected by factors such as geographical, ethnic and gender. Apart from these, cardiovascular disease, hyperlipidemia, obesity, metabolic syndrome, smoking and at least one of the family members being hypertensive require regular screening of individuals for blood pressure. While the prevalence of hypertension in Turkey is 31.8% in the adult population over the age of 18, it was found to be 72.2% in the population over the age of 60. Increasing efforts towards this health problem, which is increasing in size all over the world, are deemed necessary. For this reason, determining the risk factors of hypertensive individuals is seen as an important step in the fight against hypertension in the early period.

Materials and Methods: This work; A retrospective study was conducted to determine the demographic characteristics of patients diagnosed with essential hypertension who applied to a university hospital.

The universe of the research; All essential hypertensive patients who applied to the University Hospital Cardiology and Hypertension Outpatient Clinic, the sample of the study was; It consists of all individuals diagnosed with essential hypertension who applied to the Cardiology and Hypertension Outpatient Clinic of the hospital between 01.01.2017 and 01.01.2018. The data were collected by the researcher by retrospectively examining all patient file records between 01.01.2017-01.01.2018 belonging to the Cardiology and Hypertension Outpatient Clinic of the hospital where the research was conducted.

Results: More than half of the individuals included in the study (57.7%) were women, and 92.0% of women were newly diagnosed with hypertension, 36.5% were aware of hypertension, and these

rates were higher than men.

Age and BMI are the main risk factors for high blood pressure. It was determined that those whose blood pressure was found to be at the level of hypertension during the measurement and those who had a previous diagnosis of hypertension had a higher risk of being diagnosed with hypertension than those with a higher age and BMI than those with a lower BMI. On the other hand, it was determined that age and BMI were not statistically significant variables for diagnosis of hypertension. Considering the percentages of keeping hypertension under control, those who stated that they had high blood pressure before and those who stated that they were diagnosed with hypertension; It has been observed that the younger ones can keep their blood pressure under control better than the older ones. In the light of all these findings, it is seen that it becomes more difficult to keep blood pressure under control with increasing age.

Conclusion: Regular blood pressure monitoring of adults who apply to health institutions should be done.

- Different strategies should be developed for individuals with risk factors for hypertension.
- Hypertensive individuals should be educated about how to measure blood pressure and hypertension.

Introduction

Hypertension (HT) is an important health problem that causes many serious events such as early mortality, decreased quality of life and increased health expenditures (1). If HT cannot be treated successfully due to the clinical picture it creates, it causes serious organ damage (2,3). When the demographic characteristics of hypertensive individuals are examined, it is seen that blood pressure is affected by factors such as geographical, ethnic and gender (4). It is recommended that those with a history of diabetes or cardiovascular disease are among the most risky groups for the development of HT, and that people with at least one of these diseases should be screened regularly for HT (5). Studies have found a relationship between high body mass index (BMI)

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and high blood pressure (6,7). In addition, it has been determined that weight gain increases the risk of high blood pressure, even if it remains within the normal BMI limits (8). Apart from these, it is recommended that people with cardiovascular disease, hyperlipidemia, obesity, metabolic syndrome, smoking history and those with a diagnosis of HT in at least one of their family members should be screened for the evaluation of blood pressure levels (5). Studies show that no progress has been made in raising awareness about hypertension in the last 10 years, and the rates of treatment and compliance are low. According to current hypertension guidelines, blood pressure control rates have stalled at 34% (1). Complications of blood pressure increasing with age affect the life expectancy and quality of life negatively by reducing many socio-economic, psychological and physiological abilities of the individual. In addition, elderly and hypertensive individuals become dependent and in need of care in their daily living activities (8-10).

HT is seen as an important health problem worldwide. It is accepted that one out of every four adults in the world is affected by this condition and some of them are not aware of this change in blood pressure. Recent studies have shown that hypertension can be prevented or its course can be changed with early diagnosis and lifestyle changes, bringing the importance of health education on this disease to the agenda (2). Although the prevalence of HT in Turkey is 31.8% in the adult population over the age of 18, it was found to be 72.2% in the population over the age of 60 (11). The prevalence of hypertension, which increases with age, causes the elderly to use health services more and for a longer period of time, and an increase in the need for social support with addiction. However, with policies that prioritize interventions to prevent chronic health problems such as HT, delay its onset, and reduce disability, it can be ensured that the elderly live longer independently and long-term care can be reduced (12). It is estimated that there are approximately 15-18 million hypertensive individuals in Turkey. In some regions, the frequency of hypertension may increase due to both low socio-economic level and wrong eating habits (11,12). There is a direct correlation between high blood pressure and complications of hypertension (cardiovascular, sero-bravascular and renal). The higher the blood pressure, the higher the probability of encountering these complications. With appropriate treatment, the incidence of coronary heart disease, heart failure, stroke and kidney disease and related death can be reduced by 30%. One of the important problems encountered in HT is that people with hypertension are not aware of their condition. Only 68% of hypertensive adults are aware of their condition. 50% of those with hypertension are using medication and only 27% of those receiving treatment have blood pressure below 140/90 mm/Hg. The majority of patients with hypertension are diagnosed at an early stage through comprehensive screening studies and public education about HT symptoms in developed countries. A significant portion of hypertensive patients do not receive adequate treatment (12,13). For this reason, HT causes financial losses for both the individual and the country. Increasing efforts towards this health problem, which is increasing in size all over the world, are deemed necessary. The main purpose of preventive health services should be to protect and improve public health. The most important way to serve this purpose is to fight the most common, deadly and most disabling diseases. One of the best examples of this is the fight against hyperten-

sion (6).

This work; It was conducted retrospectively to determine the demographic characteristics of patients diagnosed with essential hypertension who applied to Cumhuriyet University Practice and Research Hospital.

Materials and Methods

Purpose and Form of the Research

This study was carried out retrospectively to determine the demographic characteristics of essential hypertensive patients who applied to the University Hospital Cardiology and Hypertension Outpatient Clinic.

Population and Sample of the Research

The universe of the research; All essential hypertensive patients who applied to the University Hospital Cardiology and Hypertension Outpatient Clinic, and the sample of the study was; It consists of all individuals diagnosed with essential hypertension who applied to the Cardiology and Hypertension Outpatient Clinic of the hospital between 01.01.2017 and 01.01.2018.

Inclusion and exclusion criteria in the study in line with the information in the files of the patients;

- 18 years and over,
- Those diagnosed with essential hypertension were included.
- Those with severe mental disorders,
- Those with cancer, kidney failure, thyroid dysfunction, liver dysfunction were not included in the study.

Collection of Research Data

The data were collected by the researcher by examining all patient file records between 01.01.2017-01.01.2018 belonging to the Cardiology and Hypertension outpatient clinic of the hospital where the research was conducted.

Statistical Analysis

The data obtained from the study were loaded into the SPSS (version 16.0) program, and when the parametric test assumptions were fulfilled, the variance analysis of the difference between the two averages was used in the evaluation of the data, and if the parametric test assumptions were not fulfilled, the man whitney -u test, kruskal -wallis test and chi-square test were used. The $p < 0.05$ value was considered statistically significant in the study.

Ethic

Faculty of Medicine Ethics Committee Approval (No. 2015-12/08) was obtained for the study. Permission was obtained from the hospital method where the study was conducted for patient file scans.

Table 1: Demographic characteristics of hypertensive individuals

Demographic features	N (%)	*Newly diagnosed with hypertension	*With awareness of hypertension
Gender			
Female	750(57.7)	690 (92.0)	251 (36.5)
Male	550(42.3)	446 (81.2)	152 (34.2)
Total	1300(100.0)	1136(87.4)	403(31.0)
Age (years)			
<40 years	400(30.7)	366(91.6)	155 (42.4)
≥40	900(69.3)	746(57.4)	613(82.3)
Total	1300(100.0)	1112(85.5)	768(59.0)
Education status			
Illiterate	152 (11.7)	148 (97.4)	72 (48.6)
Primary school and above	580(44.6)	249(42.9)	143(57.4)
University and above	568(43.7)	172(29.6)	172(100.0)
Total	1300(100.0)	569(43.8)	387(29.8)

*Percentages were calculated based on the prevalence of hypertension.

Table 2: Blood Pressure Measurement Control and Diagnosis of Hypertension

Blood Pressure measurement before	N(%)	As a result of the measurement	
		newly diagnosed with hypertension N(%)	with awareness of hypertension N(%)
Those who do not have their blood pressure measured	205 (15.8)	108 (52.7)	97 (47.3)
Those who measure blood pressure	1095 (84.2)	442 (40.4)	653 (59.6)

Table 3: Logistic regression analysis of variables that may have an impact on hypertension awareness and control in newly diagnosed patients

Variables		B	P	Odds ratio	%95Confidence Interval	
					Lower	Upper
Identifying new hypertension in those who have not had their blood pressure measured before (n=205)	Age	0.063	0.002	1.065	1.024	1.107
Not having blood pressure measured / not found to be high before belirlenenlerde HT saptanma (n=1095)	Gender (Ref. Female)	0.779	<0.001	2.179	1.427	3.328
	Age	0.038	<0.001	1.039	1.025	1.053
	BMI	0.051	0.014	1.052	1.010	1.095

Results

More than half of the individuals included in the study (57.7%) were women, and 92.0% of women were newly diagnosed with hypertension, 36.5% were aware of hypertension, and these rates were higher than men.

While the majority of those included in the study (84.2%) had their blood pressure measured before, more than half (52.7%) of those who had their blood pressure measured in the hospital for the first time were diagnosed with hypertension, only 47.3% of them were found to be aware of hypertension.

When the blood pressure was evaluated together with those whose blood pressure was found to be at the level of hypertension or who had been diagnosed with hypertension before, the risk of detection of hypertension was higher in those with older age and BMI than in those with a low BMI, while the effect of other variables was not significant. Age and BMI are the main risk factors for high blood pressure. While the probability of hypertension being under control was higher in those who stated that they had high blood pressure before and those who were diagnosed with hypertension, the effect of other variables was not found to be significant in younger patients than in older ones. This shows that with increasing age, it becomes more dif-

icult to control blood pressure.

Discussion

In this study, the prevalence, awareness, control and influencing factors of HT were examined. It was determined that 59.6% of the participants who had their blood pressure measured before had high blood pressure.

The prevalence of hypertension (systolic and/or diastolic blood pressure of 140/90 mmHg or higher) in adults aged 18 years and over in the world was found to be approximately 24% in men and 20% in women in 2019 (1,14). In Turkey, the prevalence of hypertension is predicted to reach 30.4% in 2023 and 36% in 2045 (11). The prevalence of HT among the participants in the study was 57.7%, together with those with HT or those who were previously diagnosed with HT (Table 2). According to the multivariate Forward LR analysis, age and BMI were the main risk factors for the prevalence of HT, while the effects of independent variables such as gender and educational status were not significant (Table 3). In addition, according to the multivariate Forward LR analysis, hypertension awareness was higher in women and older adults, while the effect of independent variables such as education status and BMI was not significant (Table 3). The prevalence of HT among the participants in the study was found to be much higher

than the world average. However, the results are closer to the prevalence found in the country where the study was conducted (15-19). This high level of hypertension data in the study can be explained by the fact that the research was conducted in a developing country. In this context, when the prevalence of hypertension in developing countries was examined, it was found that it was 32.2% in men and 30.5% in women, and 40.8% and 33% in developed countries, respectively (20-23).

The fact that the socio-demographic characteristics of the participants (excluding age and BMI) do not have an effect on the prevalence and awareness of HT indicates that the health services related to HT are insufficient. In addition, the lack of effect of independent variables such as education status and BMI on HT awareness indicates insufficient health education and counseling. In many countries, HT awareness and control in patients applying to health institutions is also insufficient (24,25).

Conclusion

Adults who apply to health institutions should be regularly monitored for blood pressure.

Different strategies should be developed for individuals with risk factors for hypertension.

Hypertensive individuals should be educated about how to measure blood pressure and hypertension.

Author Contributions: Concept - Design - Supervision - Resources - Materials - Data Collection and/or Processing - Analysis and/or Interpretation - Literature Search - Writing Manuscript - Critical Review - Other - GS

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