

Hypertension related knowledge and its relationship with control of high blood pressure in Pakistan

Abstract

Introduction: High blood pressure (HBP) is a leading major risk factor for chronic diseases and deaths. The prevalence of patients with hypertension (HT) had reached from 600 million in 1980 to one billion in 2008. **Aims and objectives:** The basic aim of the study is to find the relationship of knowledge about hypertension with the control of blood pressure. **Methodology of the study:** This cross sectional study was conducted in Mayo hospital Lahore during January 2021 to July 2021. The data was collected from 100 patients of high blood pressure and visited the OPD of hospital. A questionnaire was prepared by the researchers in accordance with the literature to measure the level of knowledge about HT. The questionnaire had 15 items as follows: three questions about BP classification; four questions about HT complications, four questions about treatment and BP control; and four questions about signs and follow-up of HT. **Results:** The data was collected from 100 patients of both genders. On comparison of questions related to knowledge, there was statistically significant different in; meaning of hypertension ($p < 0.001$), target SBP ($p < 0.001$), target DBP ($p < 0.001$), importance of SBP versus DBP, improvement of health with lowering of blood pressure ($p < 0.002$), high blood pressure being asymptomatic ($p < 0.001$), changing lifestyle improves blood pressure ($p < 0.003$), hypertension being a lifelong disease ($p < 0.001$), lifelong treatment with anti-hypertensives ($p < 0.001$) and high blood pressure being part of aging ($p < 0.001$). **Conclusion:** It is concluded that patients who were aware that elevated BP levels lead to reductions in life expectancy had a higher compliance level with medication use and follow-up visits than patients without this awareness.

Introduction

High blood pressure (HBP) is a leading major risk factor for chronic diseases and deaths. The prevalence of patients with hypertension (HT) had reached from 600 million in 1980 to one billion in 2008. The prevalence of HBP was approximately 40% among adults of 25 years and above in 2008. Approximately 7.5 million people (12.8% of all-cause deaths) die every year due to HBP. It is estimated that HT is responsible for 45% of deaths due to heart diseases and 51%

of deaths due to stroke. HBP consists of 3.7% of Disability Adjusted Life Years (DALY) [1]. Even prehypertension (PreHT) increases mortality risk due to cardiovascular and stroke-related diseases. Hypertension (HTN) is one of the most common medical disorders, associated with an increased incidence of all-cause and cardiovascular disease (CVD) mortality. Fifty-four per cent of strokes and 47% of cardiac deaths are attributed to suboptimal blood pressure control. Despite presence of a variety of antihypertensive medications hypertension remains uncontrolled [2]. Data on 22,282 patients, from national and regional blood pressure control and antihypertensive pharmacotherapy prescribed in cardiology practice quotes figure of overall 21.2% controlled hypertension. The control rates of hypertension in patients presenting to primary care range from 37% in Italy to 65% in South Africa and Canada. According to a survey in 2010 control rates of hypertension are barely 6% in primary health care settings of Pakistan [3].

High blood pressure (HBP) is a leading major risk factor for chronic diseases and deaths. The prevalence of patients with hypertension (HT) had reached from 600 million in 1980 to one billion in 2008 [4]. The prevalence of HBP was approximately 40% among adults of 25 years and above in 2008. Approximately 7.5 million people (12.8% of all-cause deaths) die every year due to HBP. It is estimated that HT is responsible for 45% of deaths due to heart diseases and 51% of deaths due to stroke [5]. HBP consists of 3.7% of Disability Adjusted Life Years (DALY). Even prehypertension (PreHT) increases mortality risk due to cardiovascular and stroke-related diseases [6].

Aims and objectives

The basic aim of the study is to find the relationship of knowledge about hypertension with the control of blood pressure.

Methodology of the study

This cross sectional study was conducted in Mayo hospital Lahore during January 2021 to July 2021. The data was collected from 100 patients of high blood pressure and visited the OPD of hospital. A questionnaire was prepared by the researchers in accordance with the literature to measure the level of knowledge about HT. The questionnaire had 15 items as follows: three questions about BP classification; four questions about HT complications, four questions about treatment and BP control; and four questions about signs and follow-up of HT.

Statistical analysis

The data were analyzed with SPSS version 19. Statistical analyses were carried out by the help of simple correlation tests and backward LR model of multiple variables binary logistic regression.

Results

The data was collected from 100 patients of both genders. On comparison of questions related to knowledge, there was statistically significant different in; meaning of hypertension ($p < 0.001$), target SBP ($p 0.001$), target DBP ($p 0.001$), importance of SBP versus DBP, improvement of health with lowering of blood pressure ($p 0.002$), high blood pressure being asymptomatic ($p < 0.001$), changing lifestyle improves blood pressure ($p 0.003$), hypertension being a lifelong disease (< 0.001), lifelong treatment with antihypertensives (< 0.001) and high blood pressure being part of aging (< 0.001).

Table 1: Comparison of knowledge score in patients with controlled and uncontrolled hypertension

Characteristic	Overall%(n)	Controlled Hypertension%(n)	Uncontrolled Hypertension%(n)	P value**
Hypertension means				
High blood pressure	46.1(206)	38.7 (171)	7.9 (35)	<0.001
Hypertension is dangerous				
Agree*	62.6 (280)	49 (214)	15.1 (66)	
Strongly agree*	28.6 (128)	20.6 (90)	8.7 (38)	-
Systolic BP should be				
<140 mm hg*	69.8 (312)	54.3 (242)	15.7 (70)	0.001
Diastolic BP should be				
<90*	68.5 (306)	53.2 (238)	15.2 (68)	0.001
Which BP is more important				
both*	18.8 (84)	16 (70)	3.2 (14)	0.003
Lowering BP improves health				
agree*	67.8 (303)	53.2 (230)	16.9 (73)	
strongly agree*	19.4 (87)	13.4 (58)	6.5 (28)	0.02
High BP is asymptomatic				
agree*	31.3 (140)	27.6 (119)	4.9 (21)	
strongly agree*	6.7 (30)	4.4 (19)	2.6 (11)	<0.001
HTN is a lifelong disease				

agree*	51.9 (232)	43.1 (189)	9.8 (43)	
strongly agree*	21.5 (96)	16.4 (72)	5.5 (24)	<0.001
Antihypertensives for life				
agree*	51.9 (232)	42.7 (190)	9.4 (42)	
strongly agree*	23.0 (103)	17.1 (76)	6.1 (27)	<0.001
High BP part of aging				
agree*	44.3 (198)	38.7 (171)	6.1 (27)	
strongly agree*	8.9 (40)	6.1 (27)	2.9 (13)	<0.001

Discussion

The item questions used in this test are comparable to what has been used in our study. Our results suggest that patients are knowledgeable about HTN in general, but are less knowledgeable about specific factors related to their condition, and specifically their own level of BP control [7]. The median duration of HTN was 14 years, suggesting that even though these patients have had this condition for a long duration their knowledge is inadequate [8]. Patients were unaware that SBP is important in BP control and reported that physicians did not emphasize the significance of high SBP levels. Further, many patients (41%) did not know their BP value nor could they accurately report whether it was elevated [9].

Patients were knowledgeable about the meaning of HTN, and the seriousness of the condition to their health. Ninety-six percent knew that lowering BP would improve health and 96% thought that people can do things to lower their high BP [9]. Nearly 70% of patients knew that high BP could lead to congestive heart failure. Almost all patients were aware of their HTN with 91% reporting that a doctor or health care provider had told them that they have HTN [10]. These

findings are consistent with NHANES III data suggesting that there has been an increase in BP awareness [11].

Conclusion

It is concluded that patients who were aware that elevated BP levels lead to reductions in life expectancy had a higher compliance level with medication use and follow-up visits than patients without this awareness. More emphasis needs to be made on target blood pressure and need for taking anti hypertensives for life to patients by physicians.

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