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ORIGINAL ARTICLE

Compliance and Adherence to Treatment in Hypertensive Patients in different Tertiary Care Hospitals in Lahore

JUNAID MUSHTAQ[1], ISRAR-UL-HAQ[2], WAQAS MAHMOOD[3], MUJTABA HASAN SIDDIQUI[4], ATIQ AHMAD[5], MUHAMMAD ASIM RANA[6], MUHAMMAD MANSOOR HAFEEZ[7]

[1]Senior Registrar, [2]Associate Professor, Department of Gastroenterology & Hepatology, Medical Unit 1, Post Graduate Medical Institute/ Lahore General Hospital, Lahore.
[3]Consultant Intensivist and Internist, King Saud Medical City, Riyadh, Saudi Arabia
[4]Associate Professor of Medicine, Akhtar Saeed Medical and Dental College, Lahore
[5]Assistant Professor of Medicine, M. Islam Medical and Dental College, Gujranwala
[6]Consultant Physician&Head of Department of Critical Care, Division of Medicine, Bahria International Hospital, Lahore
[7]Director Research and Development, Expert Doctors, Private, Limited, Lahore
Correspondence to Dr. Mujtaba Hasan Siddiqui, E-mail: omujidr@yahoo.com Cell: 0332-4174 357

ABSTRACT

Aim: To determine the factors that affect compliance and adherence to medications of hypertensive patients visiting OPD clinics.
Study design: Descriptive-cross sectional study.
Place and duration of study: Department of Medicine, Unit 1, Lahore General Hospital, Doctors Hospital & Medical Center and Farooq Hospital Lahore from 1st January 2019 to 31st December 2019.
Methodology: One hundred and sixty five patients with hypertension were handed over questionnaire socio-demographic, compliance and adherence were recorded.
Results: Patients who maintained BP charting were only 13(7.9%) and those without BP charting were 152(92.1%). Patients taking regular medications were only 20(12.1%). Forgetfulness in taking medications was found in 47.3% of patients. 20.6% of patients were unable to purchase medicines because of financial reasons. Thirty two patients (19.4%) thought that they should not take medicines as they were not having any symptoms.
Conclusion: Major causes of non-adherence were expense of medications, lack of symptoms, lack of money, forgetfulness, lack of awareness due to poor educational status and nature of job.
Keywords: Compliance, Adherence, Medications, Hypertension, Forgetfulness

INTRODUCTION

American Heart Association (AHA) and American College of Cardiology (ACC) defined the new lower readings of hypertension[1]. WHO highlighted in its report in Geneva, 2013 that elevated blood pressure was found to be a major culprit in causing 7.5 million deaths throughout the world, so uncontrolled hypertension can be considered as a "Silent Killer"[2].

Adherence to taking medications is dependent on the behavior of the patient and it explains how much a patient follows the recommendations by the physician. It is considered to be an important factor regarding disease control and preventing its complications[3,4].

This study focuses on asking essential questions to have an idea of the understanding of patients regarding their own condition and also about their health beliefs which will help in improving their compliance to medications. A randomized controlled trial documented that reduction in blood pressure can be achieved with better compliance to medications and adherence to lifestyle recommendations[5].

A meta-analysis of 94 studies in Netherlands showed that, concerns about the side effects of drugs, loss of sexual performance, or better effects of traditional remedies must be clarified by the health care provider in order to increase adherence to antihypertensive medication[6].

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In a Malaysian study, which was carried out in a primary care in the district of Melaka Tengah, it was found that 56% of the 464 sampled patients were taking anti-hypertensives medications regularly[7]. In another study, 51.3% of interviewed patients had poor adherence to prescribed hypertensive medications[8].

A cohort study showed that factors compromising the rates of adherence also include the duration of hypertension. Much higher rates and better adherence in hypertensive patients were reported with shorter duration and having less number of medications. Adherence was also affected by the use of multiple agents including angiotensin-converting enzyme (ACE) inhibitors, calcium antagonists and thiazide diuretics[9].

The objective of the study was to determine the factors that affect compliance and adherence to medications of hypertensive patients visiting OPD clinics.

MATERIALS AND METHODS

After approval from Ethical Review Board, this cross-sectional survey was conducted from 1st January 2019 to 31st December 2019 at Lahore General Hospital, Doctors Hospital & Medical Center and Farooq Hospital, Lahore. A total of 230 patients of either sex with their ages more than 18 years were included. Details of socio-demographic status including name, gender,marital status, age, education, medications, blood pressure charting, vitamin supplements, regularity of taking medications, forgetfulness and lack of money and presence of hypertensive symptoms noted. Systolic and diastolic blood pressure was measured

by the research participants. Hypertensive patients of both genders taking oral antihypertensive medications for the past 3 months having ages 18 years or above were included. All the patients of hypothalamic-pituitary-adrenal axis dysfunction or other pituitary or adrenal tumors were excluded. The data was entered and analyzed through SPSS-20.

RESULTS

There were 89(53.9%) males and 76(46.1%) were females. One hundred and 38(83.6%) were married and 27(16.4%) were unmarried. Patients who used to record BP in the form of BP charting were only 13(7.9%) and those without BP charting were 152(92.1%). Those who were regular in taking their medications were 20(12.1%) and those who were not were 145(87.9%). Those who forgot to take their medications were 78(47.3%) and those who did not were 87(52.7%). Lack of money was also found to be an important factor depicting patient's compliance in taking medications.

Table 1: Demographic information of the patients (n=165)

Variable	No.	%
Gender		
Male	89	53.9
Female	76	46.1
Education		
No formal education	110	66.7
1-6 years	22	13.3
9+ years	33	20.0
Marital status		
Married	138	83.6
Unmarried	27	16.4
Age (years)		
18 – 39	51	30.9
40 – 59	59	35.8
60^{+}	55	33.3
Medical information		
No medication	-	-
Loop diuretics	31	18.8
Beta blockers	28	17.0
ACE inhibitors	8	4.8
Thiazide diuretics	44	26.7
Calcium channel blockers	11	6.7
Angiotensin-II receptors blockers	43	26.1
BP charting		
Yes	13	7.9
No	152	92.1
Non-presentation (Medical/supplements)		
Yes	37	22.4
No	128	77.6
Regularity		
Yes	20	12.1
No	145	87.9
Forgetfulness		
Yes	78	47.3
No	87	52.7
Lack of money		
Yes	34	20.6
No	131	79.4
Lack of symptoms		
Yes	32	19.4
No	133	80.6

Patients who did not take medicines because of lack of money were found to be 34(20.6%) and those who did not have lack of money were 131(79.4%). Few patients in this study assumed that they should not take medicines because they don't have any symptoms. Those with lack of symptoms were found to be 32(19.4%) and those with symptoms were 133(80.6%). Most commonly prescribed classes of antihypertensive drugs included Loop Diuretics, Beta Blockers, ACE (Angiotensin Converting Enzyme) Inhibitors, Thiazide Diuretics, Calcium Channel Blockers and Angiotensin-II Receptors Blockers by the healthcare staff of different hospitals (Table 1).

DISCUSSION

Uncontrolled blood pressure in chronic hypertensive patients can cause serious life-threatening complications which can lead to higher incidence of mortality and morbidity. It also causes a great economic burden to the health care sector and national health budget. Compliance and adherence to the prescribed antihypertensive drugs is extremely important that can affect blood pressure control drastically. A much higher level of improvement occurs in blood pressure control with only a small improvement in adherence[10]. The awareness and intervention programs should be planned for the betterment of patients with non-adherent nature and incompliant behavior. In this study, we made some efforts to identify the reasons for non-adherence and then, suggested few steps to improve it and the bottom line was through a better connection and communication between the health care staff and hypertensivepatients[11].

In the present study, major cause of non-compliance among the patients was the forgetful nature of patients. This can be improved by increasing the sense of responsibility and by the use of smart devices like placing an alarm or a reminder in the phone. Cost of medications was found to be another factor to compromise the adherence and, therefore, poor patients were less likely to adhere to the prescribed medications due to their unaffordability. This finding of non-affordability of patients to purchase medicines due to poor socioeconomic status and thus leading to poor control of BP is in accordance with a Malaysian study[11].

Other causes of compromised compliance to treatment were found to be the irregularity in taking medications, lack of symptoms and use of other non-prescribed drugs. Regular BP charting can be beneficial in blood pressure control in helping patients to be more compliant, adherent and regular in consumptions of medications as recommended by the American Heart Association[12]. Our study also revealed that most commonly prescribed antihypertensive drugs included Loop Diuretics, Beta Blockers, Thiazide Diuretics, Calcium Channel Blockers, Angiotensin-II Receptors Blockers, Angiotensin Converting Enzyme (ACE) Inhibitors by the healthcare professionals. We recommend that the prescribing physicians should be advised to prescribe the medications in accordance with the latest guidelines.

CONCLUSION

The major causes of non-adherent nature of patients were found to be expensive medications, lack of symptoms, forgetfulness, lack of awareness due to poor educational status and irregularity in drugs' consumption due to non-serious attitude.

Conflict of interest: Nil

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