

Treatment Adherence and Quality of Life in Patients on Antihypertensive Medication in Southern Rajasthan Population

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Abstract

Background: The purpose of this study is to evaluate medication adherence in hypertensive patients.

Method and Materials: Participants in this observational, cross-sectional study had hypertension for the previous year and were treated in the Department of Medicine Pacific Medical College & Hospital, Udaipur. Hypertensive outpatients under the age of 18 were the focus of the study. A method known as systemic sampling was used to find people to participate. A definite history, careful clinical assessment, and guiding for way of life changes was finished on all members selected. Patients were given the WHO-QOL Bref and Morisky Medication Adherence Scale-8 (MMAS-8) questionnaires to fill out in a separate room.

Results: 152 patients participated in the study, with a mean MMAS-8 Score of 4.88 ± 1.10 and a mean number of medications taken per person of 1.680.79. Seventy-four percent of patients were taking a combination of medications. Group 1 (on a single medication) and Group 2 (on two or more medications) were the two groups of participants. Better quality of life and significantly higher MMAS-8 scores were found in Group 1.

Conclusion: Compared to patients on more than two medications, those on a single medication had significantly better adherence, slightly better quality of life, and better adherence correlation.

Keywords: Hypertension, Quality of Life, anti-hypertensive Medication.

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Introduction

It was expected that the overall burden of hypertension (defined as blood pressure (BP, mm Hg) more than 140 systolic or 90 diastolic) would rise from 918 million adults in the year 2000 to 1.56 billion in the year 2025 [1]. The extended increase in the encumbrance of hypertension reflected a

normal ascent in both hypertensive patients from 26.4% to 29.2% and the overall populace. As the worldwide prevalence of hypertension was estimated at 31.1% in 2010, affecting 1.39 billion people [2], these projections appeared conservative.

In mangment of patients, two main factors contribute to control of hypertension, to achive BP values are clinically valid: specifically, prescription of a suitable number and dose of advised BP drugs and adherence with treatment. As a crucial factor in BP control, patient adherence is the focus of this evaluation. "The full benefits of medications cannot be realized at currently achievable levels of adherence" and "Drugs don't work in patients who don't take them" [3] are insightful statements with timeless truth. [4]

The prevalence of hypertension ranges from 12 to 17 percent among adults living in rural areas to 20 to 40 percent among adults living in urban areas. It is anticipated that the number of people with hypertension, which includes men and women nearly equally, will rise from 118 million in 2000 to 214 million in 2025 [5,6]. In the population of people aged 25 or older, 23.1% of men and 22.6% of women have hypertension, according to WHO Health Statistics 2012 It was viewed as liable for around 12.8 percent of the complete of all worldwide passings causing roughly 51% of death from strokes and 45% from coronary vein sickness in 2004 [7].

A study carried out in United Kingdom to depict convictions of hypertensive patients about their disease and drug showed that those patients who had faith in the need for prescription were more consistent, number of other significant prescient elements were age, close to home reaction to illness and confidence in private capacity to control disease. Therefore, data on wellbeing convictions were vital to accomplish concordance and may be an objective of intercession to further develop consistence [8]. We designed this study because a thorough literature search revealed that there is a lack of data on medication adherence among Indian hypertensive patients.

Methodology

For one year, this cross-sectional, observational study was conducted out in the Department of Medicine Pacific Medical College & Hospital, Udaipur. All patients experiencing hypertension and took drugs were enrolled in the study. The study was approved by the Institutional Ethics Committee and patients were selected after giving their informed consent.

The study included patients aged 18 to 60, who had a history of hypertension (Blood Pressure > 140/100 mmHg) and had been registered for treatment of hypertension at any center for a year. The study did not include women who were pregnant or lactating, had a history of heart or respiratory failure, had a recent myocardial infarction (MI), were in shock, had liver disease, or used alcohol frequently. The participants received lifestyle modification counseling in addition to a thorough clinical examination and detailed history taking. The Morisky Medication Adherence Scale-8 (MMAS-8) and WHO-QOL Bref questionnaires were distributed to the patients; In a separate room, they were given time to complete the questionnaire without the treating physician's interference.

We included an adherence assessment using the eight-item Morisky medication adherence scale (MMAS-8) in order to improve the strength and consistency of our findings (14). Patients are asked to answer one 5-point Likert scale question and a set of seven questions on the MMAS-8 with a "yes" or "no" response. A score of 8 indicates complete adherence, while scores below zero indicate a lower level of adherence. Patients in this study were classified as non-adherent if their MMAS-8 score was less than 6, and as adherent if their score was greater than 6.

Results

550 hypertensive patients who visited the OPD over a 12-month period were screened for participation in the study; 88 patients

were excluded from the study because they did not meet the eligibility requirements. Because they did not provide informed consent, approximately 31 patients were excluded from the study. The baseline demographics of the 431 patients who participated in the study are presented in

Table 1. Patients were on average 49.18 ± 14.31 years old, took an average of 2.18 ± 0.87 medications per day, and 74% of them were taking a combination of hypertension medications. The mean MMAS-8 Score was 4.88 ± 1.10 .

Table 1: Baseline characteristic of participants

Characteristic	(n=302)	(n=431)
Age(years) (Mean±SD)	48.67±12.42	49.18±14.31
Sex(M:F)	160:142	155:176
Duration of illness (years) (Mean±SD)	5.02±2.87	5.15±3.02
Number of Medications used (Mean±SD)	1.82±0.98	2.18±0.87
% Medications as Drug Combination	74.5 % (n=225)	75.39 % (n=201)
Morisky Medication Adherence Scale – 8 (MMAS-8) Score (Mean±SD)	4.30±1.07	4.88±1.10

Patients were divided into two groups based on the number of medications they used. Group 1 was patients taking a single antihypertensive drug, regardless of whether it was a single compound or one drug and he was two compounds. Group 2 had patients taking two or more drugs in combination or individually. Group 1 included 210 patients and Group 2 included 221 patients. All patients gave their informed consent. Group 2 participants received 2.74 ± 0.89 drugs per

person to treat hypertension. The number of participants in group 1 was 78 on a single compound on one drug, which was statistically higher than the participants in group 2 (n = 22). Mean disease duration was significantly shorter in group 1 than in group 2 (4.01 ± 2.05 years vs. 5.45 ± 2.98 years) and MMAS-8 scores were significantly higher in group 1 (5.78 ± 1.68 vs. 3.69 ± 0.94) -Patients Group 1 adhered better than Group 2

Table 2: Baseline characteristic of both groups

Characteristic	Group 1 (n=210)	Group 2 (n=221)
Age(years) (Mean±SD)	55.37±8.60	54.81±09.14
Sex(M:F)	115:95	110:111
Duration of illness (years) (Mean±SD)	4.01±2.05	5.45±2.98
Number of Medications used (Mean±SD)	1	2.74± 0.89
Medications as Drug Combination (single drug: drug combnation)	98:87	78:92
Morisky Medication Adherence Scale – 8 (MMAS-8) Score (Mean±SD)	5.78±1.68	3.69±0.94

Discussion

Hypertension continues to be the leading cause of non-communicable disease death worldwide, and the global epidemic is largely unmanaged. A well-known factor that contributes to the poor control of blood

pressure in hypertension is suboptimal adherence, which includes failing to begin pharmacotherapy, failing to take medications as directed, and failing to continue treatment for an extended period of time. A few classes of variables including

segment, financial, concomitant medical-social circumstances, treatment related, medical care group and framework related elements, and patient elements are related with nonadherence. In managing nonadherence, it is helpful to understand the various categories of factors. Electronic and biochemical monitoring are useful for detecting nonadherence and improving adherence in patients at high risk for major adverse cardiovascular outcomes.

In mild cases, lifestyle intervention, which includes dietary interventions, weight reduction, tobacco cessation, and physical activity, should be the initial approach to hypertension management [11,12]. The risk of cardiovascular disease can be reduced by appropriate treatment of hypertensive patients through lifestyle interventions alone or in combination with medication [13]. The development of left ventricular hypertrophy was reduced by 37% and cardiovascular events were reduced by 50%, respectively, when systolic pressure was decreased by 3.8 mmHg and diastolic pressure was decreased by 1.5 mmHg [9,14]. Long-term hypertension medication adherence is necessary for both primary and secondary cardiovascular disease prevention [9,15]. Over the past few years, there have been numerous treatment advancements; [15,16] New antihypertensive medications have been developed that are less likely to cause side effects.

55.9 percent of hypertensive patients in Lebanon and Jordan were found to be adherent to their antihypertensive medication in a study to determine the level of adherence to treatment and its associated factors. Older age was associated with better adherence, whereas having a lower quality of life was associated with being divorced or widowed. Patients in our study who were on a single medication for a shorter period of time had better adherence, so our findings are comparable to those of this study.

Patients on a single medication also had slightly better quality of life in our study [9].

Another study looking at adult hypertension treatment adherence found that most patients who had been sick for a longer period of time did not take their medication and did not take their antihypertensive medication. The findings of this study are somewhat comparable to those of ours, as ours demonstrated that patients who were taking more than two medications and had been ill for a longer period of time were less likely to adhere [10].

Conclusion:

Patients' adherence scores were found to be low, and they were significantly lower in patients who were taking two or more medications together or a single compound. Our concentrate additionally showed that personal satisfaction was somewhat better in patients on single prescription and would be wise to adherence relationship when contrasted with patients on multiple meds.

The medical services group can find multiple ways to work on quiet adherence through shared dynamic on administration, guaranteeing patients grasp the seriousness and outcomes of their sickness and advantages of therapy and control, working with BP self-observing with transfer and counsel, remedy of minimal expense, successful meds, particularly as single pill mixes, and regular development of patients with uncontrolled hypertension.

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