Impact of patient counseling on medication adherence and quality of life in hypertensive patients

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ABSTRACT

Aim and Objective: The research aimed to evaluate the effect of patient counseling in hypertensive patients on medication adherence and quality of life (QoL). To enhance the intervention of pharmaceutical care, better knowledge of hypertension, increased adherence to antihypertensive treatment, and improved general health-related QoL can result. **Materials and Methods:** This was an observational study. A total of 132 patients have been enrolled; 111 patients have completed the study. Patients in the intervention group received patient counseling, patient information form (PIF). Medication adherence and QoL were assessed using the Morisky and Minichal-Brazil scales. The score was evaluated and statistically analyzed. A comparative study was conducted between pre- and post-consultation scores. There was a statistically significant difference ($P < 0.001$) between pre- and post-consultation. **Conclusion:** The research found a significant rise in drug adherence respondents following completion of pre- and post-consultation. However, the interventional activity record reduced the still important QoL at the end of the intervention team.

KEY WORDS: Hypertension, Medication adherence, Quality of life

INTRODUCTION

Hypertension is a disease that can cause various organ injuries and the goal of lifelong hypertension treatment is to control hypertension.[1,2] Blood pressure is not under optimal control in more than half of these patients.[3] The most common reason is non-compliance therapy.[4-6] It makes the "sense of compliance"' to be able to understand, manage, and interpret. Compliance sense is related to the current condition interpretation. In that case, by estimating one's own power, indoor and outdoor events, preparing sensations, and behavior, the person can live safely. Gender, marital status, educational level, revenue level, and hypertension education in hypertensive patients were discovered to be affected by treatment compliance.[7,8] Medicines used in the therapy of hypertension are also reported to be efficient for disease perceiving and compliance.[8,9]

On the other hand, in advanced stages of the disease, hypertension impairs the quality of life (QoL) and shortens the lifespan, although its course is silent at the start. Hypertensive patients feel the psychology of getting a chronic disease and have difficulty changing their lifestyle; adverse impacts on QoL, therefore, exist. In the past research, factors such as diet and exercise in hypertensive patients[10-12] have been discovered to have adverse impacts on QoL.

The literature on compliance with therapy and QoL in various chronic diseases[12-16] contains several studies. Various factors affect QoL in hypertensive patients and there are few studies available in these patients on therapy and QoL compliance.[3,10-12] The objective of this research was to evaluate the effect of an instructional intervention on hypertensive patients to improve their adherence to medication and to determine the connection with their QoL.

METHODS

Sample

The research sample included 121 patients aged 18 years or older who had been diagnosed with hypertension at the Medicine Departments, Employer State Insurance Hospital, India, at least 3 months

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earlier, who were free from any illness that might affect their cognitive function and volunteered to participate in the research. Hypertension, known as high or high blood pressure, is a disease in which blood vessels have continuously increased blood pressure.[2,3,5] Standard adult blood pressure is defined as 120 mmHg of blood pressure when the heart beats (systolic) and 80 mmHg of blood pressure when the heart (diastolic) is relaxed. If systolic blood pressure is equal to or greater than 140 mmHg and/or diastolic blood pressure is equal to or greater than 90 mmHg, blood pressure is considered to be higher or higher than.[3,17]

Data Collection

After the investigator gave explanations to patients, information was gathered through patient interviews. All patients included in the research included in the instruments for information collection: Personal Information Form (PIF), MINICHAL-Brasil life scale quality, and self-reported medication adherence scale.

Personal Information Form

This form was prepared for the purpose of determining certain sociodemographic and clinical features of patients with hypertension by the scientists in the light of data in literature.[3] The form includes questions related to sociodemographic and patient history about patient age, gender, marital status, location of residence, academic status, employment status, occupation, and length of disease.

Minichal

Brazil QoL scale: The Mini Cuestionario de Calidad de Vida en Hipertension Arterial (MINICHAL) was selected after a systematic review[13] of the MEDLINE database to verify the tools available for assessing hypertension QoL.

MINICHAL is a multiple-choice 16-question questionnaire divided into two variables: Mental status (10 questions) and somatic manifestations (6 questions) and 1 question to evaluate the patient's understanding of how hypertension and its therapy have affected their QoL. The patient should answer questions about the 7 days before. The domain responses are allocated on a frequency scale of Likert type, with four response choices ranging from 0 (No, not at all) to 3 (Yes, very much). The highest rating for the domain of mental status is 30, while it is 18 for the domain of somatic manifestations. The nearer the outcome is to 0 (zero), the better the QoL, with this scale and considering the number of issues. Question number 17, which evaluates the general perception of the patient's own health, is also scored on the Likert scale but is not included in either of the two domains.

Ethical Considerations

The Committee on Institutional Ethics received institutional permission. Study goals, plans, and benefits were clarified to the research criteria met by the WHO patients. Patients were questioned if they could engage in the research on a voluntary basis and received their written/oral consent. At all times, confidentiality has been preserved.

Analysis of Data

It was decided that the research should have included 120 people. Statistical data were loaded into the Statistical Package for the Social Sciences with a 95% confidence interval for Windows, version 14.0. Calculation of percentage, mean value, test of meaning between two mean values, and Student's *t*-test were used on the assessment of information. Arithmetic mean and standard deviation were used to provide data in tables. Statistically significant values of $P < 0.05$ were regarded.

RESULTS

When compared between pre-counseling and post-counseling phases, patient medication adherence shows better significant difference between groups.

When compared between pre- and post-counseling phases, patient's QoL showed better significance in the post-phase.

DISCUSSION

In our study, medication adherence shows a significant difference between groups after post-counseling. Age, gender, comorbidities, social history, and family history were found to be associated with drug adherence compare to other studies.

Table 1 represents patient's gender, out of selected 121 patients, 67 patients (55.3%) were male patients and 54 patients (44.6%) were female patients, the study confirms that male patients were affected more than women with hypertension.

Table 1: Gender distribution

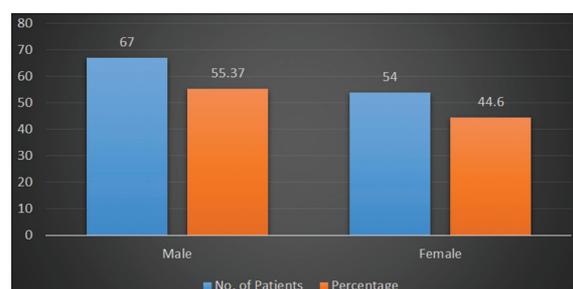| Gender	Number of patients (*n*=121) (%)
Male	67 (55.37)
Female	54 (44.63)

Table 2 represents patient's age, 7 patients (5.7%) were in the age group of 25–35 years, 10 patients (8.2%) were in the age group of 36–45 years, 33 patients (27.2%) were in the age group of 46–55 years, 50 patients (41.3%) were in the age group of 56–65 years, 21 patients (17.3%) were in the age group of more than 65 years. Hence, in this study, it indicates that more number of people in the age group of 56–65 years is affected with hypertension.

Table 3 represents comorbidities, out of selected 121 patients, 52 patients (47.9%) were single comorbidity, 28 patients (23.1%) were multiple comorbidities, and 41 patients (33.8%) were no comorbidities. The study confirms that single comorbidity was affected more than multiple.

Table 4 represents patient's family histories, of 121 patients, 48 patients (39.6%) were hypertension with family history and 73 patients (60.3%) were hypertension without family history. The study indicates that more number of patients were without hypertension family history.

Table 2: Age distribution

Age (years)	Number of patients (*n*=121) (%)
25–35	7 (5.79)
36–45	10 (8.26)
46–55	33 (27.27)
56–65	50 (41.32)
>65	21 (17.35)
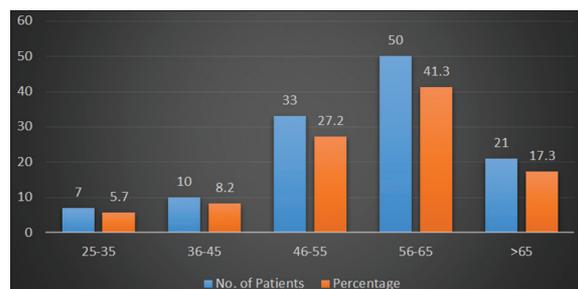
Table 3: Comorbidities

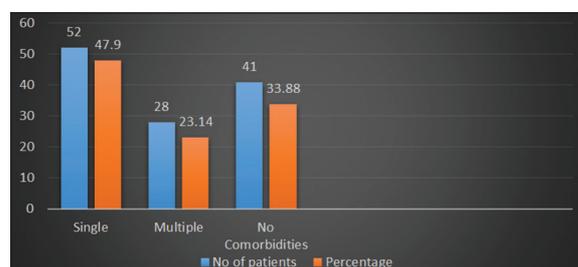| Comorbidities	Number of patients (*n*=121) (%)
Single	52 (47.93)
Multiple	28 (23.14)
No comorbidities	41 (33.88)

Table 5 represents patient's social habits, 10 patients (14.9%) do not have any social habits, 9 patients (13.4%) are alcoholic, 15 patients (22.3%) are smoker, 21 patients (31.3%) are smoker and alcoholic, and 12 patients (17.9%) are past smoking and drinking. In this study, people who prone to smoking and alcoholic were affected.

Table 6 represents patient's adherence to the medication of pre-counseling in poor adherence had a mean value of 39.5 ± 1.2 and the good adherence showed a mean value of 17.6 ± 9.6 and $P = 0.0432$. The medication adherence of post-counseling in poor adherence had a mean value of 21.4 ± 8.3 and the good adherence showed a mean value of 49.6 ± 3.2 and $P = 0.0321$.

The QoL represents in Table 7, pre-counseling in poor QoL had a mean value of 29.6 ± 11.4 and the good QoL showed a mean value of 31.2 ± 10.4 and $P = 0.5659$. The QoL of post-counseling in poor QoL had a mean value of 34.6 ± 7.2 and the good QoL showed a mean value of 42.6 ± 4.6 and $P = 0.0101$.

Table 4: Family history

Data analyzed	HTN (%)
With family history	48 (39.66)
Without family history	73 (60.33)
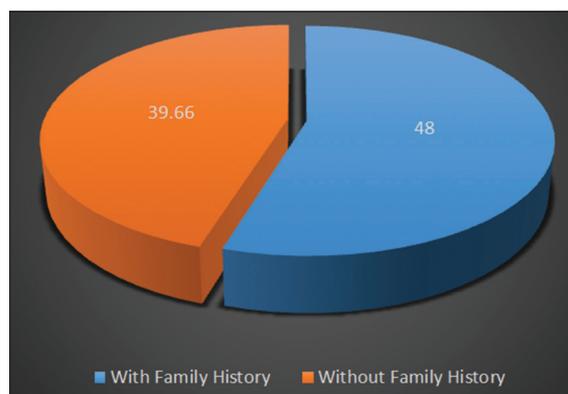
Table 5: Social history

Characteristics	Number of patients (%)
Nil	10 (14.92)
Alcoholic	9 (13.43)
Smoker	15 (22.38)
Smoker and alcoholic	21 (31.34)
Past smoking and drinking	12 (17.91)
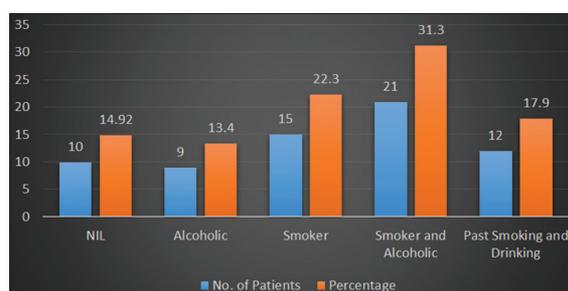
Table 6: Medication adherence rate pre- and post-counseling

Variable	Poor adherence	Good adherence	*P*-value
Pre-counseling	39.5±1.2	17.6±9.6	0.0434
Post-counseling	21.4±8.3	49.6±3.2	0.0321

Table 7: Quality of life pre- and post-counseling

Variable	Poor QoL	Good QoL	*P*-value
Pre-counseling	29.6±11.461.4	31.2±10.4	0.5659
Post-counseling	34.6±7.2	42.6±4.6	0.0101

QoL: Quality of life

There was no important distinction in adherence between patients who frequently underwent blood pressure and inspections of antihypertensive therapy and patients who did not. Patients who checked their blood pressure on a regular basis were more compliant.[12,14] This outcome could be anticipated (likely due to the tiny amount of patients studying the absence of statistical importance) and confirms the need for patient schooling about periodic checkups. When assessing a patient with bad blood pressure control, health-care professionals should consider non-adherence to medication. In selecting associate intervention to increase medication compliance, clinicians should consider involving the patient in associated intervention that overcomes the specific obstacles of the patient.

CONCLUSION

A total of 121 patients with hypertension were included in this study. The aim of the study is to assess the impact of educational intervention on hypertensive patients to enhance their adherence to drugs and their QoL.

This research demonstrates that pharmacist initiates educational interventions to boost patients understanding of their situation in a manner that changes their medicine views favorably. Such modifications are recognized to lead to enhanced rates of compliance.

A clinical pharmacist can play a significant part in enhancing patient adherence to medication and QoL through patient education and creating diet maintenance of day-to-day scheduling pleasure and reducing the majority of morbidity rates through continuing education programs.

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