Assessment of Medication Adherence and Knowledge of Hypertension among Hypertensive Patients in Urban Field Practice Area: A Cross Sectional Study

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Abstract: _Background: Hypertension is the one of the major preventable non - communicable diseases. It exerts a public health burden on cardiovascular diseases, stroke and renal diseases worldwide. The prevalence of hypertension in India is 29.8%. The treatment for hypertension is usually lifelong and this brings about problems regarding patient compliance. So, this study aims at evaluating the treatment adherence for patients with hypertension. Objectives: To assess Medication adherence In previously diagnosed Hypertensive Patients in urban field practice area. To assess knowledge about medication in previously diagnosed Hypertensive Patients in urban field practice area. Methods: The study was carried out as a cross sectional study among 230 hypertensive patients, using simple random sampling technique in the field practice area of a medical college. The patient's adherence was assessed using MGL Scale consisting of 4 questions and the reason for non - adherence was studied. Grading was done based on answers marked and analysed using SPSS. Results: The prevalence of adherence to hypertensive medication by the patients was found to be 43%.62% were not aware that vital organs can get affected by hypertension. Only 32.9% could tell the names of their medicines and only 43% felt that blood pressure should be monitored monthly. Conclusion: The prevalence of patient's adherence to hypertension management was only 43% in this study population. The poor adherence will definitely affect the health of the individual leading to many complications. It is our duty to increase the adherence to medication by addressing the issues through various health programmes and health education._

Keywords: Patient Compliance, Non - Communicable Disease, Blood Pressure

1. Introduction

Hypertension is the one of the major preventable non - communicable diseases. Nearly 63% of total deaths in India are due to non - communicable diseases, of which 27% are attributed to cardiovascular disease which affects 45% people in the 40 - 69 age group[1]. Raised blood pressure is among the most important risk factors for CVDs. Moreover, it remains poorly controlled due to low awareness about hypertension, lack of appropriate care through primary care and poor follow up. It exerts a public health burden on cardiovascular diseases, stroke and renal diseases worldwide. The prevalence of hypertension in India is 29.8%[1]. The treatment for hypertension is usually lifelong and this brings about problems regarding patient compliance. Medication adherence usually refers to whether patients take their medications as prescribed (eg, twice daily), as well as whether they continue to take a prescribed medication[2]. Medication adherence is a growing concern to clinicians, healthcare systems, and other stakeholders (eg, payers) because of mounting evidence that nonadherence is prevalent and associated with adverse outcomes and higher costs of care[3].

So, this study aims at evaluating the treatment adherence for patients with hypertension.

Aims and Objectives
- To assess Medication adherence In previously diagnosed Hypertensive Patients in urban field practice area of a tertiary care center

- To assess knowledge about medication In previously diagnosed Hypertensive Patients in urban field practice area of a tertiary care center

2. Materials and methods

- **Study design:** Cross sectional study
- **Study Setting:** Urban Field Practice area of a Medical College in central India
- **Sampling technique:** Simple random sampling
- **Inclusion criteria:** People residing in urban field Practice area aged 30 and above who were diagnosed with Hypertension.
- **Exclusion criteria:** Patients who were diagnosed less than 1 year before enrollment in the study, Pregnant women, Severely ill and bed ridden persons.

Sample Size
With reference to study article by Vighnesh et al (2017) [4], with Prevalence of medicine adherence in patients being 25.1%, with absolute precision of 6%, required sample size was 201.

Data Collection and Analysis
NPCDCS register kept in urban health training center was used to identify cases of hypertension. Cases which had even serial no. were selected for enrollment. They were visited at their homes where after ensuring that they fit in the inclusion criteria, purpose of the study was explained to them. Informed consent of the subject was takenand the subjects

were interviewed at their homes. Data was recorded in a Google form.

4 Point MGL Medication adherence scale[5] was used to assess Medication adherence to anti hypertensive medication.

Ethical consideration
Approval from Institutional Ethics Committee was sought. Necessary approvals were taken from the respective authorities.
Informed consent was obtained in their vernacular language after explaining purpose of the study

3. Results

Table 1 shows general characteristics of the study subjects.230 subjects were included in the study.100 (42%) were males while 130 (58%) were females. Age range of the subjects was from 31 - 84. Mean Age was 58.73 (+ - 9.5). Most of the study subjects belonged to age group of 60 - 69, with 36.5%. About 57.39% (153) subjects were Hindus. A large portion of subjects were educated up to High school (27.82%) and Middle school (27.82%). Majority (41.73%) of subjects were Housewives. Majority of them (47.82%) belonged to Class 2 on modified B. G. Prasad Scale (2021) [6]. Most of the subjects (45%) were diagnosed since last 1 - 5 years.

Table no.2 Shows levels of adherence to medicines in hypertensive patients. Only 43.47% subjects showed high adherence to medicines.35.21% showed low adherence and 21.31% showed medium adherence.120 subjects confessed to sometimes forgetting to take their medicines.125 said that they sometime stop taking medicines if they feel better.

Table no.3 shows the subject's basic knowledge about their medicines.67.1% were unable to tell the name of their medicines. Only 37% were that hypertension can damage other organs of the body. Only 43.5% knew that blood pressure should be checked monthly. However, 89.9% felt that taking their medicines regularly will help to manage the disease.90.3% felt that they should take medicines regularly. Only 41.1% knew that giving up alcohol and tobacco helps in reducing blood pressure.

4. Discussion

In the present study, 43.47% subjects showed high adherence to their medicines, while in similar study in Tamilnadu, it was 25.1%. in another study it was 24.1% [7].

In a study based on NHFS - 4 data, adherence was found to be 26.78%[8].

Even though 90% study subjects knew that medicines should be taken regularly, still adherence levels were poor. Similarly, Aubert et al[9] reported that most people had enough knowledge but only a few were motivated and wished and attempted to have change, and very few had translated it into practice, whereby actively engaging in a new behaviour.

37.1% subjects knew that hypertension can adversely affect other organs. A community based cross sectional study done at rishi valley by Busingye D et al[10] also showed that only 31% study subjects were aware of adverse effects of hypertension.

5. Limitations

Since this study included only hypertensive patients living in an urban area, it is not generalizable to different populations. As data was collected by house - to - house visits, sometimes those subjects who were out for their jobs were not present. Hence their representation is poor in the sample.

The study is subjected to recall bias.

This study is subjected to all the limitations of a cross sectional study.

6. Conclusions

- The prevalence of patient's adherence to hypertension medication was only 43% in this study population.
- The poor adherence will definitely affect the health of the individual leading to many complications.
- Only 32.9% could tell the names of their medicines and only 43.5% felt that blood pressure should be monitored monthly.
- 62.9% were not aware that vital organs can get affected due to increased blood pressure.

It is our duty to increase the adherence to medication by addressing the issues through various health programs and health education.

Table 1: Socio- demographic of study subjects

Gender	Number (230)	Percentage (%)
Male	100	42%
Female	130	58%
Age in Years		
30 - 39	5	2.17
40 - 49	31	13.47
50 - 59	79	34.34
60 - 69	84	36.5
70+	31	13.47
Religion		
Hindu	132	57.39
Muslim	76	33.04
Buddhist	22	9.56
Education		
Post Graduate	9	3.91
Graduate	32	13.91
High school	64	27.82
Middle school	64	27.82
Primary school	41	17.82
No formal education	20	8.69
Occupation		
Professional	15	6.52
Clerical, Shop owner	30	13.04
Skilled worker	40	17.39
Unskilled worker	27	11.73
Homemaker	96	41.73
Unemployed	22	9.56

Socioeconomic Status		
Class I	27	11.73
Class II	110	47.82
Class III	59	25.65
Class IV	27	11.73
Class V	7	3.04
Duration since diagnosis		
1 - 5 Years	104	45
5 - 10 years	71	30
>10 years	55	25

Socioeconomic classification is according to modified B. G. Prasad Scale 2021

Table 2: Medication Adherence According to MGL Scale

Level of Adherence	Number (230)	Percentage (%)
Low	81	35.21
Medium	49	21.30
High	100	43.47

Table 3: Knowledge about Hypertension and Medication

Question	Yes	No	Don't Know
Should the medicines be taken regularly?	90.30%	7.20%	2.50%
Does giving up alcohol and tobacco help In reducing blood pressure?	41.10%	19.50%	39.40%
Do you think taking medicines regularly helps to manage hypertension?	89.90%	4.20%	14%
Are you able to tell the name of your medicines?	32.90%	67.10%	NA
Does reducing salt intake help In reducing blood pressure?	63.40%	16%	20.60%
Should you check your blood pressure monthly?	43.50%	26.30%	30.20%
Do other organs get affected due to increased blood pressure?	37.10%	62.90%	-

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