

BENEFITS OF CLINICAL PHARMACISTS PHARMACEUTICAL CARE INTERVENTION TO QUALITY OF PATIENT'S LIFE AND CONTROL HYPERTENSION

KARTHIKEYAN G, RANGANAYAKULU D

Department of Pharmaceutics, Sri Padmavathi School of Pharmacy, Tiruchanoor, Tirupathi - 517 503, Andhra Pradesh, India.
Email: karthikeyan.govindan@gmail.com

Received: 01 August 2014, Revised and Accepted: 20 August 2014

ABSTRACT

Aim: Hypertension is a clinical condition of persistent raised arterial pressure, primarily due to increased vascular resistance in the systemic circulation. The main aim of this study was investigate the benefits of clinical pharmacists' pharmaceutical care and treatment is, therefore, to prevent the damage to vital organs which cause clinical symptoms and increase mortality of the patients with hypertension.

Study Design: A cross sectional prospective, randomized, controlled study was carried out in private hospitals in Tamilnadu. Patients were asked six questions to understand about clinical pharmacist general communication and pharmaceutical care towards patients while buying.

Methods: Standard Pharmaceutical care questionnaire administered to 100 patients in private hospitals located in Tamilnadu.

Result and Discussion: Out of 100 patients said 59% of the pharmacist always explains the things in an easy & understandable way to the patients, 62% of the staffs always show courtesy and Average 61% always does care for the patients. In health and medicine related communication and counseling 48% of the staff talks to the patients about their health and the problems they are facing and 50% of the pharmacist speaks to the patients about any side effects they are facing on taking the medicine. 55% of the staffs explain the new medicines in the prescription and 53% explains the Dos & Don'ts while taking the medicine and 54% explains the precautions to be taken if they face any side effects. Average 52% answers are towards always & 35% says sometimes, 13% never interact with the patients. Over perception about the clinical pharmacists, 60% of the patients rated as Good, 28% rated average and 12% of the people rated as poor.

Keywords: Hypertension, Clinical pharmacy, Clinical pharmacists, Pharmaceutical care

INTRODUCTION

Hypertension is the most common cardiovascular disease; its prevalence increases with advancing age. Elevated arterial pressure causes pathological changes in the vasculature and hypertrophy of the left ventricle. Hypertension is the principal cause of stroke, is a major risk factor for coronary artery disease and its complications, and is a major contributor to cardiac failure, renal insufficiency, and dissecting aortic aneurysm [1]. In the majority of the patients of hypertension (90%) the underlying cause is not detected, and the condition is primary hypertension [2]. It should be noted that the diagnosis of hypertension depends on measurement of blood pressure (BP) and not on symptoms reported by the patients. In fact, hypertension is usually asymptomatic until overt end-organ damage is imminent [3]. Hypertension presents a major area of intervention because it is a frequent condition and is amenable to control through both non-pharmacological lifestyle factors and pharmacological treatment [4]. The overall prevalence of global was recently determined to be as 26.6% of men, and 26.1% of women were affected hypertension [5]. Indication that adherence to hypertensive medication knowledge is not good for in our country [6]. Over the past several decades, health professionals and public officials have increased their efforts to educate the public about the hazards of untreated hypertension, and this has led to a significant increase in the number of hypertensive individual patients who are aware via lifestyle modifications and pharmacologic agents [7]. The aim of this present study was to be estimating the benefits of clinical pharmacists pharmaceutical care intervention to quality of patient's life and control hypertension.

METHODOLOGY

This prospective, randomized, controlled study was carried out in the private hospital located in Tamil Nadu. The study was approved by the Institutional Ethics Committee for the use of humans in research, and written informed consent was obtained from all participants before their enrollment in the study.

Patients included in the main study were recruited from the current patient population showed at the clinics, patient inclusion and exclusion criteria were provided below, eligible participants were all adults of age 18-60 and with an established medical diagnosis of hypertension, whether their BP was controlled or not.

According to our guidelines, pre-hypertension 120-139 and 80-89, Stage 1 hypertension 140-159 and 90-99, Stage 2 hypertension ≥ 160 and ≥ 100 , for patients with or without diabetes or any other diseases were included in the study

Inclusion criteria

- Patients at least 18-60 years old
- Confirmed diagnosis of essential hypertension those who were using anti-hypertensive drugs from 1 month to 5 years and also those who are recommended for lifestyle modification
- Ability to speak and write in Tamil
- The patients with hypertension and also diabetic were part of the study provided they were on anti-hypertensive medication.

Exclusion criteria

- Patients those who are pregnant were excluded from the study
- Patients aged <18 and >60 years
- Unconscious and severely ill -patients who cannot be interviewed
- Patient who is non-cooperative.

Inclusion of the patients

Patients recruited with small dose starts from the smallest effective dose; (a) increase the smallest dosage if the small dose failed to reach the adequate BP; (b) applying for durative action preparations as a priority can improve patients' medication compliance, lower BP stably and reduce target organ damage; (c) drug combination. If the current anti-hypertensive drugs do not have an obvious effect or adverse reactions on the patients, we should combine different kinds of drugs rather than increasing the dosage. However, there should be appropriate and reasonable combination in the use of anti-hypertensive

drugs to achieve maximum anti-hypertensive effect while reducing adverse reactions.

All 12 questions, which are given below were asked to the patients and got a response like “always, sometimes and never” and last one question asked about the service of pharmacist and pharmacy.

General pharmacy staff communication

- How often did the staff at this pharmacy explain things in a way that was easy to understand?
- How often did the staff at this pharmacy listen carefully to you?
- How often did the staff at this pharmacy treat you with courtesy and respect?
- How often did the staff at this pharmacy spend enough time talking with you?
- How often did the staff at this pharmacy show concern for you?
- If you wanted to talk to the staff at this pharmacy about your health or medicine, how often were you able to talk to staff as soon as you wanted to?

Health and medicine related staff communication and counseling

- How often did the staff at this pharmacy talk with you about your health?
- How often did the staff at this pharmacy ask if you were having any problems with your medicine?
- When you had a new prescription filled at this pharmacy, did the staff tell you how often and when to take your medicine?
- When you had a new prescription filled at this pharmacy, did the staff tell you what to avoid when taking your medicine?
- When you had a new prescription filled at this pharmacy, did the staff tell you what to do if you had bad reactions?

Clarity of written information about medicine

- How often were the instructions on your medicine labels easy to read and understand?

General items

- What number would you use to rate about the service of the staff, pharmacy and pharmacist?

RESULTS AND DISCUSSION

Pharmaceutical care

Pharmaceutical care is the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve the patients’ quality of life. The goal is to provide the information that encourages safe and appropriate use of medications, thereby enhancing therapeutic outcomes. To get the best beneficial outcome from medicine, it is important to have a good relationship between health care provider and patient. Patient should have confidence in pharmacist if adherence to medicine is to be maintained. Basically communication with the patient in the language and understands, taking feedback from the patient regarding outcomes of medicines therapy and answering his questions to solve all doubts regarding therapy and ever contributing toward patients regular health. Clinical pharmacist must have the knowledge and understanding of the patient as a whole and must be able to consider present or future drug therapy in terms of patients’ current status, behavior, the objectives of the therapy and prognosis. Pharmacist also is able to communicate on the appropriateness of drug therapy, benefits ratio and able to suggest regimes. A complex relation links the patient and its treatment. The process of making drug therapy decisions and ultimately providing the patient with drugs is complex [8]. Pharmaceutical care has been analyzed in two parts general pharmacists’ commission and health and medicine related staff communication and counseling. There are six questions were asked to 100 sample patients to understand about pharmacist approach and care towards the patient while buying. The below (Table 1) indicates the responses of 59% of the pharmacist always explains the things in an easy and understandable way to the patients, and 62% of

the pharmacist always shows courtesy, respect and concern toward the patients while buying the medicine.

The Chart 1 provides on average what’s the behavioral approach of the pharmacist toward the patients while buying. About 61% of the pharmacist always does care for the patients. They give respect and concern toward them and also explain the things better and in well manner.

Health and medicine related communication and counseling

Clinical pharmacist is able to do this because; pharmacist has not only the knowledge of pharmacological properties of the drug, but also the knowledge of physical, chemical and pharmaceutical properties of medicines, which are not taught to physicians. Hence, clinical pharmacist is able to predict possible adverse effect that can be expected, any drug interaction possibilities and any other factor, which modify drug activity. Pharmacists are able to contribute significantly to direct patient care by performing therapeutic drug monitoring [9]. Under pharmaceutical care comes the counseling to the patients about the health and medicine intake. Pharmacist should naturally play a vital role in explaining the medicine-related communication well and in a better way. Five questions were asked to the sample of 100 to understand the health and medicine-related communication and counseling. The Table 2 describes the response toward the questions of health and medicine related communication and counseling of the hypertensive patients.

Out of 48% of the pharmacy staff talks to the patients about their health and the problems they are facing. 50% of the pharmacy staff speaks to the patients about any side-effects they are facing on taking the medicine. About 55% of the clinical pharmacists explain the new medicines in the prescription and 53% explains the do’s and don’t’s while taking the medicine and 54% explains the precautions to be taken if they face any side-effects. On average, 52% answers are toward always, and 35% says sometimes and 13% never interact with the patients on showed (Chart 2).

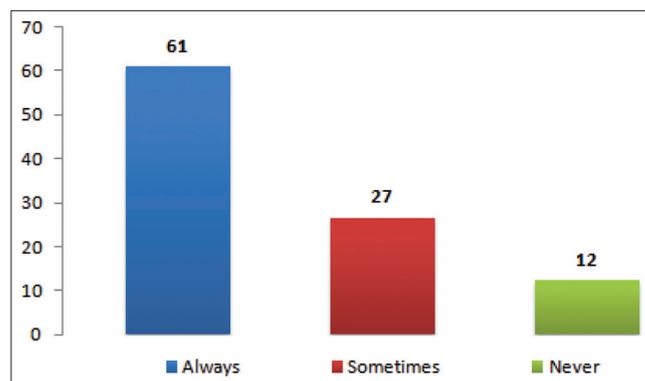


Chart 1: Behavioral approach of the clinical pharmacist

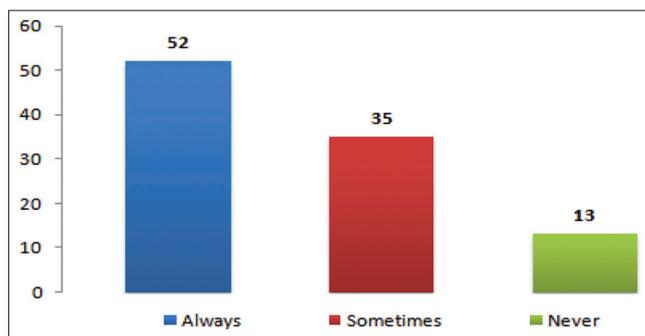


Chart 2: Average communication and counseling to the patients with hypertension

Table 1: General pharmacy staff communication

General pharmacy staff communication	Always	Sometimes	Never	Total
How often did the staff at this pharmacy explain things in a way that was easy to understand?	59	28	13	100
How often did the staff at this pharmacy listen carefully to you?	59	32	9	100
How often did the staff at this pharmacy treat you with courtesy and respect?	62	25	13	100
How often did the staff at this pharmacy spend enough time talking with you?	62	25	13	100
How often did the staff at this pharmacy show concern for you?	62	25	13	100
If you wanted to talk to the staff at this pharmacy about your health or medicine, how often were you able to talk to staff as soon as you wanted to?	62	25	13	100
Average	61	27	12	100

Table 2: Pharmacist communication and counseling with hypertensive patients

Health and medicine related staff communication and counseling	Always	Sometimes	Never	Total
How often did the staff at this pharmacy talk with you about your health?	48	39	13	100
How often did the staff at this pharmacy ask if you were having any problems with your medicine?	50	37	13	100
When you had a new prescription filled at this pharmacy, did the staff tell you how often and when to take your medicine?	55	32	13	100
When you had a new prescription filled at this pharmacy, did the staff tell you what to avoid when taking your medicine?	53	34	13	100
When you had a new prescription filled at this pharmacy, did the staff tell you what to do if you had bad reactions?	54	33	13	100
Average	52	35	13	100

Clarity of written information about medicine

The objective of this question is to know the understandability and read ability of the instructions printed on the (Chart 3). 59% of the patients responded that they are able to read and understand the instructions printed on the medicine label. 13% said they were not able to read the reason might be they should be illiterate persons.

Over perception about the clinical pharmacists

The objective of this discipline is to promote the safe and effective use of drugs in patients in collaboration with other professionals responsible for health care and more specifically, the provision of drug information to other health professionals; the acquisition of medication histories and the use of the pharmacotherapeutic profile of patients; monitoring of treatment; the provision of information and advice about medication to the patients. Clinical pharmacist has a particularly better opportunity to encourage compliance since pharmacist advice accompanies the actual dispensing of the medication and pharmacist is usually the last health professional to see the patients prior to the time the medication is to be used. Clinical pharmacist can explain the difficult terms if not, followed by the patient [10]. One hundred hypertensive patients were asked to rate the overall perception and opinion about the clinical pharmacists (Chart 4).

About 60% of the patients rated as good, 28% rated average and 12% of the people rated as poor. Still there are people who need improvement in approaching the patients and also they should respect their profession and should understand the importance and value carries by their profession. Also, their vital role plays in someone’s life. In recent years pharmaceutical care services have expanded significantly beyond these programmed, the major changes are seen in the involvement of the pharmacist in drug related decision-making processes and patient care activities. Pharmaceutical care is a key strategy at the heart of all the case studies cited above. The goal of pharmaceutical care is to enhance the patients’ health-related quality of life and achieve positive clinical outcomes within realistic economic expenditures [11].

CONCLUSION

In conclusion, this study has shown that benefits of clinical pharmacists pharmaceutical care intervention to quality of patient’s

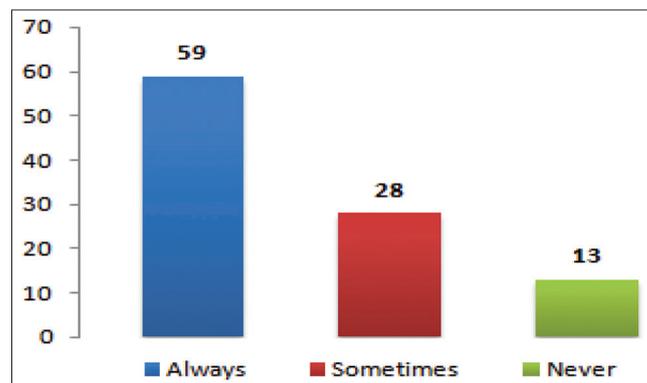


Chart 3: Clarity of Written Information about Medicine

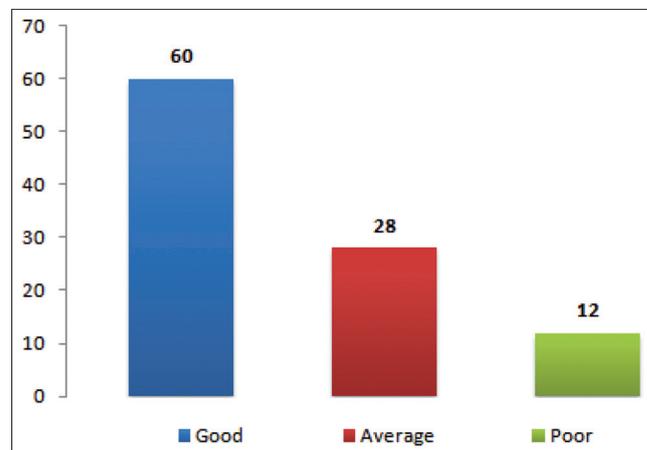


Chart 4: Over Perception about the Clinical Pharmacists

life and control hypertension. The efforts of clinical pharmacist and the other health care estimation, medication, non-adherence remains a major health community problem in public. Clinical pharmacist can be explained as a number of dosages taken incorrectly that alter the patient’s therapeutic responses.

ACKNOWLEDGMENTS

We are grateful to Mr. A. Muthukumar, Mr. Gobikrishna and hypertensive patients of the health facilities used in this study as well as the interviewers for their supports.

REFERENCES

1. Brunton LL, Parker KL, Blumenthal DK, Buxton IL. Goodman & Gillman's Manual of Pharmacology & Therapeutics. New York: The McGraw-Hill Companies; 2008.
2. Bhattacharya SK, Parantapa S, Ray A, Das PK. Pharmacology. 2nd ed. New Delhi: Reed Elsevier India Private Limited; 2003.
3. Katzung BG, Masters SB, Trevor AJ. Basic and Clinical Pharmacology. 11th ed. New Delhi: Tata McGraw Hill Education Private Limited; 2010.
4. Aubert L, Bovet P, Gervasoni JP, Rwebogora A, Waeber B, Paccaud F. Knowledge, attitudes, and practices on hypertension in a country in epidemiological transition. *Hypertension* 1998;31(5):1136-45.
5. Iyalomhe GB, Iyalomhe SI. Hypertension - Related knowledge, attitudes and life-style practices among hypertensive patients in a sub-urban Nigerian community. *J Public Health Epidemiol* 2010;2(4):71-7.
6. Palanisamy S, Swathy A. Intervention to improve patient adherence with anti-hypertensive medications at a tertiary care teaching hospital. *Int J Pharm Tech Res* 2009;1(2):369-74.
7. Brenner GM, Stevens CW. Pharmacology. 3rd ed. Philadelphia, PA: Reed Elsevier India Private Limited; 2010.
8. Goyal RK, Bhatt PA, Burande MD. Elements of Clinical Pharmacy. 5th ed. Ahmedabad: B.S. Shah Prakashan; 2010.
9. Narayanan N, Balasubramanian S. Hospital and Clinical Pharmacy. Hyderabad: Pharma Med Press; 2013.
10. Siddiqui AA, Siddiqui S, Parvez I. A Textbook of Hospital and Clinical Pharmacy. 1st ed. New Delhi: CBS Publishers and Distributors; 2009.
11. Tipnis HP, Bajaj A. Hospital Pharmacy. 1st ed. Maharashtra: Nishad Deshmukh, Career Publications; 2008.