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Patient Awareness on ADR of Drugs Used in Diabetes with Hypertension.

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ABSTRACT

The objective of the study was to provide information to the patients about the possible side effects & ADR, to ensure safe use of drugs. In the study of 600 patients having both Diabetes & Hypertension, the number of male patients was found to be 365(60.83%) & female patients was found to be 235(39.1%). This study shows that only 33(5.5%) patients were aware of Adverse drug reactions, whereas 567(94.5%) were not aware of Adverse drug reactions. 244(40.6%) patients said that they had been following a planned diet & performing exercises regularly, while 356(59.3%) patients accepted that they were not. Our study concluded that 48% of the patients had experienced drug related or drug induced problems & 14% of the people experienced adverse effects on the use of medications for Diabetes & Hypertension. This proves that the patients were not counselled about the possible side effects, adverse drug reactions and safety measures to be taken when they experience side effects or adverse drug reactions. Therefore community pharmacist has a crucial role in providing counseling to the patients about the safe & effective use of drug therapy which helps in the betterment of health care and improving the quality of life of the patients.

Keywords: Adverse drug reactions, Patient awareness, Drug use pattern, Patient counselling

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INTRODUCTION

Adverse drug reactions (ADR) is any response to a drug which is noxious and unintended, and which occurs at doses normally used in man for prophylaxis, diagnosis, or therapy of disease, or for the modification of physiological function [1]. Adverse drug events (ADEs) can occur in any health care setting, including inpatient (e.g., acute care hospitals), outpatient, and long-term care (LTC) settings (e.g., nursing homes). The likelihood of ADEs occurring may also increase during transitions of care (transitions from one health care setting to another) when information may not be adequately transferred between health care providers [2] or patients may not completely understand how to manage their medications[3]. Diabetes, hypertension and obesity decrease patient health-related quality of life while physical activity increases it. The coexistence of obesity and hypertension, in particular, has a more negative effect on health-related quality of life [4]. Our main aim of the study was to ensure medication adherence and also to guide the patient about the safety measures to do in case of any side effects or ADR occurrence

MATERIALS AND METHODS

This interventional prospective study was carried out in a good reputed community pharmacy which has its chain pharmacies throughout Tamilnadu for a period of 6 months from June- November 2013. Our study encountered 600 patients with diabetes mellitus and hypertension who were selected based on the inclusion and exclusion criteria. Approval for the study was obtained from the concerned authorities and the informed consent was obtained from the patients enrolled in the study. Of the 600 patients, 100 patients were asked a set of questionnaire regarding their awareness towards diabetes and hypertension and their knowledge was assessed.

Inclusion criteria

Patients of both genders, 18 years of above who were diagnosed with both diabetes mellitus & hypertension.

Exclusion criteria

Pregnant women and children

RESULTS AND DISCUSSION

In this study of 600 patients having both diabetes and hypertension, the number of male patients 365(60.83%) was found to be more compared to female patients 235(39.1%). The study reveals that maximum number of patients with both diabetes and hypertension were found to be 275 (45.83%) in the age group of 40-50 years which was followed by the age group of 51-60 years 144(24%). The age wise categorization is shown in Table 1.

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Age in Years	No. of Patients (n = 600)	Percentage of Patients
20 to 30	11	1.83%
31 to 40	122	20.33%
41 to 50	275	45.83%
51 to 60	144	24%
61 to 70	45	7.5%
71 to 80	3	0.5%

Table 1: Age wise distribution

The distribution of patients based on disease duration is shown in figure 1

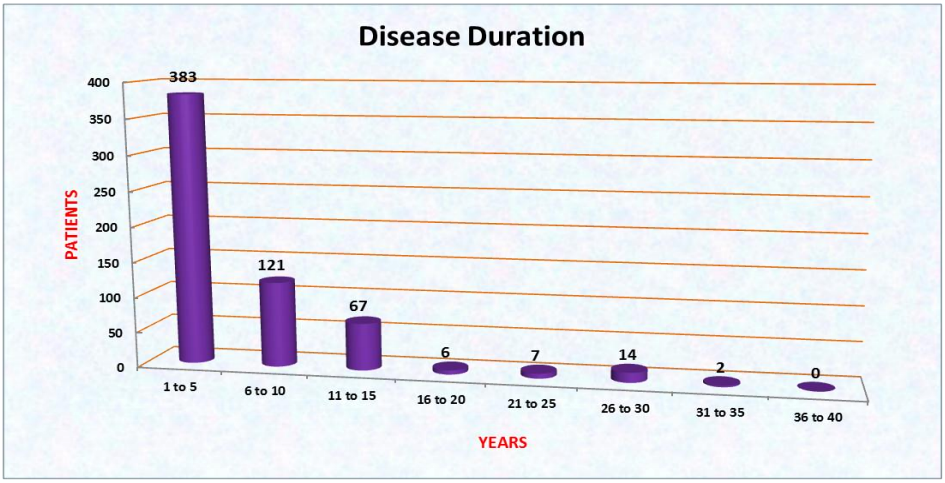

Figure 1: Distribution of patients on the basis of duration disease

The following questionnaire were asked to the selected patients and their awareness regarding their disease condition, regular checkups, medications, diet habits and lifestyle modifications were assessed.

- Do you know what is diabetes and types? a) Yes b) No
- Do you know what is hypertension & its link with diabetes? a) Yes b) No
- Do you check your blood sugar level & BP regularly? a) Yes b) No
- Do you have any family history of diabetes? a) Yes b) No
- Are you aware of lifestyle modifications required for diabetes& hypertension? a) Yes b) No
- Are you following a planned diet & exercise regularly? a) Yes b) No
- Do you think medicines can be stopped upon control of diabetes&hypertension? a) Yes b) No
- Do you check your cholesterol level? a) Yes b) No
- How often do you undergo eye checkup? a. Every 6 months b. Every year
- Have you ever felt any abnormal effects on using your Medications? a) Yes b) No
- Do you know what an adverse effect is? a) Yes b) No

- Have you ever experienced any adverse effects on using your medications? a) Yes b) No
- Do you exactly take the drugs as prescribed by doctor or missed any doses? a) Yes b) No
- Have you ever used any traditional medicine or home remedies earlier? a) Yes b) No
- Have you faced any problems in following poly pharmacy?
- A. Identifying the medicines B. Dosage regimen

Among 600 patients, 551(91.83%) were aware of the disease condition such as diabetes & hypertension whereas 49(8.16%) patients were not aware of it. The study showed that only 33(5%) patients were aware of adverse drug reactions, where as 567(95%) were not aware of adverse drug reactions as shown in table 2. 13.5% Of the patients experienced adverse effects such as hypoglycemia, edema, diarrhoea, myalgia, hypotension, photo sensitivity reactions, gastro intestinal problems & myocardial ischemia, whereas 519(86.5%) patients did not experience any ADR. 338(56.33%) Of the patients answered that they had a family history of diabetes, whereas 262(43.66%) patients told that they don't have any family history of diabetes & hypertension. 307(51.1%) Of the patients were aware of the life style modifications required for the control of diabetes & hypertension, whereas 293(48.3%) were not.

Table 2: Awareness of Adverse drug Reactions

Parameters	No. of patients	Percentage of Patients
Awareness of ADR	33	5%
No Awareness	567	95%

CONCLUSION

The study was a prospective study to evaluate the awareness of patients about the adverse effects of drugs & drug related problems for the drugs used in the treatment of diabetes & hypertension. The patients were counselled about the ADR of the anti-diabetic & anti-hypertensive drugs and precautions to be followed in the prevention of ADR. 62% of the patients said that they were not taking the drugs exactly as prescribed by the physician, which shows that there is a poor medication adherence among the large number of patients. Our study concluded that 48% of the patients were experiencing drug related or drug induced problems & 14% of the people were experiencing adverse effects on the use of medications for diabetes & hypertension. This proves that the patients were not counseled about the safe use of medications, their possible side effects or adverse drug reactions and safety measures to be taken when they experience side effects or ADR. Therefore community pharmacist has a crucial role in providing counseling to the patients about the safe & effective use of drug therapy and following up the patient, which helps in the betterment of health care.

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