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Research Article

IMPORTANCE OF CLINICAL PHARMACIST IN ENHANCING THERAPEUTIC OUTCOMES IN SEIZURE PATIENTS IN OUT PATIENT DEPARTMENT OF A TERTIARY CARE TEACHING HOSPITAL

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A B S T R A C T

Aim: To assess the importance of clinical pharmacist in enhancing therapeutic outcomes in seizure patients in outpatient department of a tertiary care teaching hospital.
Method: The study was conducted from October 2017 to March 2018 in Government General Hospital, Guntur. Patients were recruited in the study based on inclusion criteria. Data was collected by using data collection forms. Questionnaires were given to the patients. Regular follow-ups had been conducted. During follow-ups patients were monitored for dispensing errors, prescription errors, dose errors, adverse drug reactions, drug interactions. Counseling had been provided to the patients regarding their medications, diseases, life style modifications. After continuous follow-ups for 3 months (20 days interval), we observed for improvement in knowledge regarding disease and drugs, medication adherence, therapeutic outcomes.
Results: 100 seizure patients were included. The knowledge of patients during initial and after follow-ups was 30.45±1.96 and 22.84±1.59 respectively. The medication adherence during initial and after follow-ups was 20.05±2.60 and 41.73±3.16 respectively.
Conclusion: By counseling the patients there was an increase in Knowledge Assessment practise, medication adherence, decrease in Drug Related Problem's thereby increase in therapeutic outcomes. So, clinical pharmacists are important in enhancing patient care.

INTRODUCTION

Pharmacists have extensive clinical knowledge and expertise in the use of medications, and are one of the most accessible of all health care professionals. This makes them uniquely positioned in the health care system to help patients optimize appropriate medication use, reduce medication related problems and improve health outcomes through the delivery of pharmacist-provided patient care services, including medication therapy management (MTM), health promotion and education, and disease prevention and mitigation.[1]

MATERIALS AND METHODS

A Prospective Observational cohort study conducted in Outpatient department, government general hospital, Guntur, Andhra Pradesh. It was conducted in a period of 6 months i.e., between Octobers 2017 to March 2018. Our study population is about 100 patients. Before the commencement of the study the Ethical Committee Permit has been taken.

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Annexure that were used in our study includes Data collection forms, Alert cards, Patient information leaflets, KAP questionnaires.Patients receiving medications from Neurology department diagnosed with seizures were included. Patients from Pediatrics, Gynecology, Psychiatry, Orthopedics, Cardiology and age below 12 years and age above 70 years were excluded.

Patients were recruited in the study based on inclusion criteria. Data was collected regarding their demographics, personal history, social history, past medical and medication history, laboratory investigations and current medications during the initial follow-up. Questionnaires were also given to the patients. Regular follow-ups had been conducted. During follow-ups patients were monitored for dispensing errors, prescription errors, dose errors, adverse drug reactions, drug interactions. Counseling had been provided to the patients regarding their medications, diseases, life style modifications. After continuous follow-ups for 3 months with an interval of 20 days between each follow-up we observed for improvement in knowledge regarding disease and drugs, improvement in medication adherence, improvement in their therapeutic outcomes

RESULTS

An observational study on 'Importance of Clinical Pharmacist in Enhancing Therapeutic Outcomes in Out-Patient Department of A Tertiary Care Teaching Hospital'. This study was conducted in a low literacy population. The patients were recruited based on inclusion and exclusion criteria and had follow ups for 6 months. In this study, pharmacists counsel regarding the prescribed medicines, medication adherence, life style modifications, at initial follow-ups and results were being observed for 5 follow ups.

This study is also intended to evaluate the impact of pharmacist in improving knowledge, attitude, practice & medication compliance & therapeutic outcomes. Ethical committee permission was taken before commencement of the study. All the statistical analysis was calculated by using SPSS software.

Pharmacotherapeutic outcomes of 100 subjects were monitored during the study. KAP questionnaires were used to assess the patient's knowledge regarding the disease, medication and life style adaptations they have to follow to control their morbid conditions and improve their quality of life.

Questionnaires were prepared for seizures patients which consist of 16 questions. Results were compared between baseline and final follow up by assessing the scores similar to the study conducted by Mallesh M *et.al*, on Evaluation of the Clinical Pharmacist Role in a Health Care Team; a Comparative Approach.[3]

In seizures knowledge of patients during initial and after follow-ups is 30.45±1.96 and 22.84±1.59 respectively. The medication adherence during initial and after follow-ups is 20.05±2.60 and 41.73±3.16 respectively. There are many interventions that were identified during study. This coincides with Hussain Abdullah Mubarak al rahbi *et al*., a study on interventions by pharmacist in outpatient pharmaceutical care.[4]

As the study is conducted in government sector, most of the patients had adherence to medications but some of the patients were improved in their adherence when compared to the initial follow up to final follow up by educating and counseling by the pharmacist KAP questionnaires were used to assess the patient's knowledge regarding the disease, medication and life style adaptations they have to follow to control their morbid conditions and improve their quality of life and identification of DRPs and providing pharmacist intervention in patient education results in achieving higher and better therapeutic outcomes which is similar to the study conducted by Shah Jainam V *et al*., A Study of Role of Clinical Pharmacist in Medication Review and Patient Education.[5]

The current study shows that the majority of the patients had a poor knowledge about the diseases and self-medications and decreased therapeutic outcomes. Firstly the clinical pharmacist should educate the patients regarding the diseases and medications. Secondly pharmacist should check for medication adherence thereby enhanced therapeutic outcomes can be observed. Thirdly identifying the drug related problems.

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Table 1 Assessment of Knowledge, Assessment and Practice

Disease	Mean value		P value
	Initial follow up	Final follow up	
seizures	30.45±1.96	22.84±1.59	0.000

Table 2 Assessment of Medication Adherence of Patients by using Hill-Bone Scale

Disease	Mean value		P Value
	Initial follow up	Final follow up	
Seizures	20.05±2.60	41.73±3.16	0.000

Table 3 Proportion of Severity of Potential Drug Interaction out of Total Drug Interactions

S.no	Drug interactions	Initial follow up	Final follow up
1	Total number of drug-drug interactions	48	32
2	Mild drug-drug Interactions	13	5
3	Moderate drug-drug Interactions	27	24
4	Severe drug-drug interaction	8	3

Table 4 Represents the ADRS observed during the study.

S.no	Drug	Adverse drug reaction	Frequency
1	Phenytoin	Rashes	17
2	Carbamazepine	Dizziness	26
3	Sodium Valprote	Nausea	11
4	Clobazam	Sedation	6
5	Pregabalin	Fatigue	12
6	Folic acid	Constipation	28

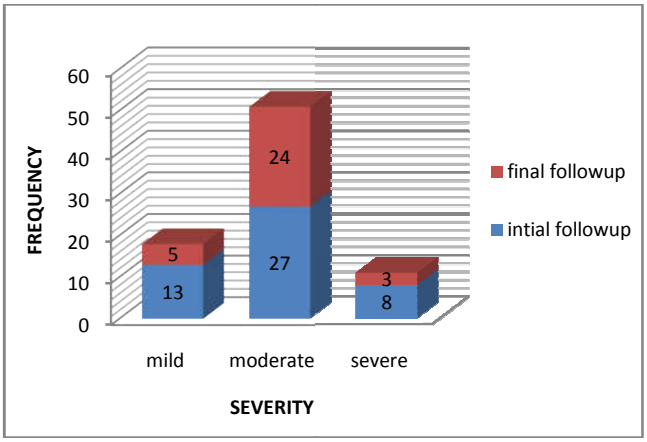

Fig: 1 Proportion of Severity of Potential Drug Interaction out of Total Drug Interactions

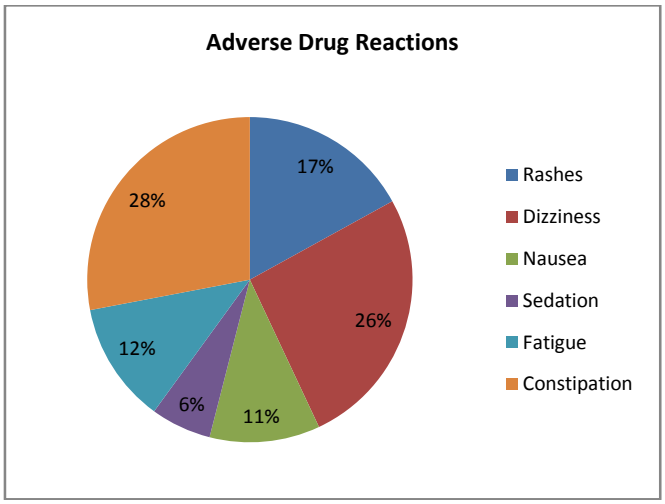

Fig 2 Adverse Drug Reactions

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