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Pharmacist Mediated Assessment of Medication Knowledge and Counseling to Depressive Disorder Patients in Tertiary Care Hospital

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Abstract

Medication knowledge is an important contributor for medication adherence which in turn improves therapeutic outcome. To assess the patient's knowledge on antidepressants and impact of pharmacist mediated counseling on their medication knowledge, patient's medication knowledge was assessed by administering medication knowledge assessment questionnaire. First assessment was considered as baseline assessment. Patients were counseled based on their knowledge on antidepressants. They were advised to attend two follow up sessions with an interval of one-month, during which they were administered with same questionnaire to reassess their medication knowledge and impact of pharmacist mediated counseling on their medication knowledge. The average medication knowledge score at baseline, first follow up and second follow up was 4.590, 6.431 and 7.318 respectively with statistically significant difference (p<0.01). There was a mean increase of 1.886 and 2.705 from baseline to first follow up and second follow up, and a mean increase of 1.841 from first follow up to second follow up, with statistically significant difference (p<0.01). The result shows the effectiveness of medication counseling by a pharmacist. Medication counseling done by pharmacist has significant impact on patient's knowledge. Assessment of medication knowledge in patients may influence their medication adherence, though it may not necessarily result in better clinical outcome.

INTRODUCTION

Medication knowledge is the range of information that patients possess about the medications. It includes information about the name of the drug, indication, dose, dosage regimen, adverse effects, precautions to be taken during treatment, contraindications and storage conditions. Patient education and counseling is defined as a combination of teaching activities that focus on keeping patients' informed about their health condition, treatment plans, medication therapy and self care management to facilitate changes in behavior for improvement and maintenance of health.[1] Patient education aims to provide clinical information to patients with the goal of increasing understanding and encouraging health promoting behavior.[2] Patient education is the most important variable affecting treatment compliance. Faulty comprehension has been reported to contribute to some 2/3rd of compliance

problems. The basic assumption underlying the hypothesized value of patient education is that, an informed and motivated patient is more likely to be compliant if he understands his drug regimen.[3] According to SHPA (Society of Hospital Pharmacists of Australia)association, pharmacists have the responsibility to provide sufficient information and counseling to enable patients and/or their caretakers to achieve informed and judicious use of their medicines.[4] The role of pharmacist in the medical field has recently grown well beyond dispensing function and expanded to clinical trials, health economics and patient education.[5] Patient compliance with medication can be expected to significantly improve, once patients are made completely aware of the importance of diligently adhering to their prescribed regimens. Pharmacist, thus providing the information on prescribed drugs to patients, and stressing the importance of following the prescribed regimen, plays a central role in combating patient non-compliance.[6] The specialized skills of clinical

pharmacists have proved to be beneficial for improving treatment outcomes. Because of their skills in identifying drug interactions, their excellent position of direct contacts and trust by patients, pharmacist can thus help patients remove evident adherence barriers and incorporate interventions into the care of their patients.[7] Educating patients about antidepressants is necessary since it is the patient who is taking the medications. Treatment adherence is more likely when the clinician is open and flexible rather than authoritarian. Most treatment issues can and should be negotiated between the clinician and the patient, and the patient must be an active participant in his/her treatment decisions.[8]

Aim of the study

The primary aim of this study was to assess the patient's knowledge on antidepressants and the impact of clinical pharmacist mediated counseling on their medication knowledge.

MATERIALS AND METHODS

This study was approved by the Institutional Ethics Committee of JNMC of the KLES College of Pharmacy. Patients attending psychiatry OPD of KLE'S Hospital during the period from June 2007 to December 2007 were included in the study. Inclusion criteria were, all patients suffering from depressive disorder who were 18 years of age or older, Patients willing to participate, Patients taking antidepressants for at least last 3 months. An exclusion criterion was patients having other medical or psychiatric co-morbidities. Demographic data was obtained from all the patients. A total of 53 patients were enrolled into the study on their visit to the hospital and the study duration was 9 months.

Counseling sessions and medication knowledge assessment

Upon enrollment, patients were given a pre-test to evaluate their medication knowledge, using medication knowledge assessment questionnaire. Except for first question (which is to name the drug) in the medication knowledge assessment questionnaire, there were four responses expected for each question. Each response was assigned a score and then final scores were added to get the total score for that patient. Expected response and scores were: 1- answering the questions correctly; 0- not answering the questions correctly. Patients received medication counselling from the pharmacist based on their basic knowledge about antidepressants with the help of patient information leaflets.

Medication counseling

At the out patient department of psychiatry, counseling was performed in a separate chamber to ensure privacy. Counseling sessions were designed so that all patients were counseled according to their individual understanding and attitude of their medication. Pharmacist explained about their disease, the antidepressants and its identification, indications, dose and regimen, duration of therapy, adverse affects, precautions and storage.

Follow up visits

All patients were followed up for two subsequent appointments, with an interval of one month, to reassess their medication knowledge.

Statistical analysis

Statistical analysis was carried out to study the significant difference between the follow-ups in medication knowledge by Mann Whitney U test, McNemar test and ANOVA test.

RESULTS

Details of patients enrolled into the study

Fifty three depressive patients were enrolled into the study, out of which 44 completed the study. Out of 44 patients, 22 (78.57%) out of 28 male patients and 22 (88%) out of 25 female patients have completed the study. Remaining nine patients did not turn up for the follow ups. Only those who completed the study were considered for the analysis.

Educational status

Out of 44 patients, 36 (81.81%) patients were literates and 8 (18.18%) patients were illiterates.

Previous counseling underwent by patients

Out of 44 patients, only 18 (40.90%) patients were counseled by psychiatrist and the remaining 26 (59.09%) patients had no previous counseling.

Details of medication counseling by health professionals

Out of 44 patients, 18 patients were counseled by psychiatrist. However, remaining 26 patients were neither counseled by psychiatrist nor by any other healthcare professionals particularly pharmacist.

Assessment of medication knowledge Medication knowledge score (Score range: 0-10)

The average medication knowledge scores were 4.59, 6.43 and 7.31 at baseline, first and second follow up respectively. Statistically significant difference (p<0.01) was observed when compared baseline with first and second follow ups scores. Moreover, medication knowledge score showed a trend of gradual increase at subsequent follow-ups (Table 2).

Assessment of Medication Knowledge in male (Score range: 0-10)

Medication knowledge of male patients was assessed as scores of 5.09, 6.59 and 7.54 at baseline, first and second

follow ups respectively. Statistically significant Difference(p<0.01) was observed in medication knowledge from baseline to first and second follow ups (Table 3)**.**

Assessment of Medication Knowledge in female (Score range: 0-10)

Medication knowledge of female patients was assessed as scores of 4.09, 6.27and 6.9 at baseline, first and second follow ups respectively. Statistically significant difference (p<0.01) was observed in medication knowledge from baseline to first follow up and second follow ups (Table 4)**.**

Comparison of medication knowledge between genders

Medication knowledge scores between genders were found to be 1.00, 0.32 and 0.59 at baseline, first and second follow ups respectively (Table 5).

Effect of educational status on medication knowledge

Medication knowledge scores were compared between literates and illiterates at baseline, first follow up, and second follow up and found the difference of 1.18, 1.06 and 1.38 respectively. Both literates and illiterates showed statistically significant difference (p<0.01) from baseline to first and second follow ups, but literacy was not found to have any effect on medication knowledge of patients (Table 6).

Distribution of knowledge

Results at baseline assessment showed immense lack of medication knowledge among patients and the extent of education that is required. The distribution of medication knowledge in patients at base line, first follow up, and second follow up is shown in **Table 7.** Results showed a statistically significant difference (p<0.01) from baseline to first and second follow ups in patient's knowledge on different aspects of drug, except on drug administration and it's duration of treatment.

DISCUSSION

This preliminary initiative study was taken up because, in Indian hospitals, depressive patients do not attain counseling on antidepressant drugs.

Details of patients enrolled into the study

Out of 53 enrolled patients, 44 completed the study with remaining nine patients failing to turn up for the follow up due to unknown reasons. These drop-outs may be due to socioeconomic factors, patient's attitude and awareness of patients on psychiatric illness.

Gender distribution

The distribution of male and female patients was nearly equal (male 52.83% and female 47.16%) among the enrolled subjects. In the study conducted by Nathaniel MR et al [9], it was stated that, depression has a life time risk

of 10-15% in women and 5-12% in men but, it was not found in our study. The possible reason may be due to the fact that, females suffering from depression may not visit to psychiatrist due to social factors.

Educational status

Out of 44 patients, 36 were literates and remaining were illiterates. In India, most of the people think that they need not undergo treatment for depression since they feel it as a part of life, which may be because of their limited knowledge or awareness towards psychiatric illness particularly depression. This assumption is much higher in illiterates and could be one of the reasons for 18.81% of illiterate patients enrolling into the study.

Previous counseling undergone by patients

Only 40.90% of enrolled patients were counseled earlier for their antidepressant drugs. A survey to investigate the concerns, difficulties and needs of psychiatric patients in the community regarding their medication showed that, out of 83 people, 62% felt they had not been provided with adequate information about their medicines and 73% considered that having access to information would improve their confidence in their medicines.[10] In Indian healthcare settings this is often found to be the reason due to lack of information/or the negative attitude of patients and health care providers. Most of the patients do not ask for information about their treatment because they feel health care providers have less time for counseling. The findings of study are consistent with the study results carried out by Chavunduka D et al.[11] Henry NY et al.[10] concluded in their study that physician provide limited information to patients while prescribing antidepressants, often omitting critical information that may promote adherence. All the 18 patients were counseled by psychiatrist. Neither the pharmacist nor nurse was involved during the counseling process. This indicates the fact that, the community pharmacies are lagging behind in providing patient counseling services.

Assessment of medication knowledge

The study results show that the counseling sessions conducted by clinical pharmacist are able to produce a statistically significant improvement in medication knowledge in patients. Similar study was carried out by Kathleen MB et al.[12] in which they found intervention of pharmacist had higher scores in drug knowledge and belief than in non-intervention studies. Another study that was conducted by Ponnusankar S et al.[13] assessed the impact of medication counseling on patient's medication.

Comparison of medication knowledge between genders

Both the genders showed statistically significant

difference from baseline assessment. Medication knowledge score showed that, the impact of pharmacist provided medication counseling was same in both the gender. Medication knowledge score in females was found lower than in males, because of less education and busy household works which hinders them to understand the disease and its treatment. Since male patients spend most of their time outside, they get the opportunity to discuss about depression and antidepressants with their fellow mates.

Effect of literacy on medication knowledge

Both literates and illiterates showed improvement in their knowledge of antidepressants, but score was higher in literates compared to that of illiterates. Literates understand the disease and treatment much better than illiterates. Educational status helps them to understand and remember easily. This develops insight and positive attitude towards antidepressants. This may be the reason for differences in the medication knowledge score.

Distribution of knowledge

Majority of patients though literates, were not good at english language. This could be one of the reasons about their lack of awareness about antidepressants and their usage. John MD [14] described patient's attitude about medication and factors affecting medication compliance. Out of 148 psychiatric patients, 87 patients had positive attitude towards medication; 40 believed that their illness was biologically or chemically based; a large proportion believed their illness is due to situational factors, including stress (36) and family problems (18); 51 patients said they need medications to get better. The findings suggest that several relevant clinical, demographic and attitudinal variables may not be associated with compliance to medications. Patients fail to discuss their treatment with psychiatrist or pharmacist on antidepressants, their administration and actions, the duration of therapy, precautions, adverse effects and its management, storage of drugs. This may be due to the lack of information and /or negative attitude of patient.

CONCLUSION

The results obtained in our study have shown that medication counseling to depressive patients by a clinical pharmacist is effective in improving their understanding of specific drug therapy. The results show the effectiveness of medication counseling by a pharmacist using motivational interviewing techniques in improving insight, attitudes and medication knowledge in the short term. These gains were maintained throughout the study period. It cannot be assumed that these effects will be maintained for longer period by patients. The study highlights an important role of the clinical pharmacist in medication counseling, advising on choice of therapy, assessing for occurrence of side effects in patients and advising thereof and along with other health professionals, helping to increase the quality of life in psychiatric patients. One of the limitations of this study was incomplete follow ups, in which nine patients could not be followed till the end of this study. Medication knowledge gained cannot assume to be maintained for longer period. Assessment of medication knowledge in patients may be good but may not necessarily result in better clinical outcome. Clinical outcome measurement can only be carried out during long term follow up of the patients. Since this was a preliminary study, it was not possible to measure the clinical outcome.

Further direction

As medication knowledge gained by patients cannot be assumed to be maintained for longer period, further follow up on medication counseling should be carried out. Future studies in this direction may incorporate the use of clinical outcome to assess the role of pharmacist in quality health care and effect of pharmacist mediated medication counseling on patients adherence to treatment.

Practice implications

Health setups in under developed countries may not have the facilities to assess patient's knowledge on antidepressants. However, pharmacist mediated medication counseling moderately helps to assess patients' medication knowledge. In this set up, provision of medication counseling by the pharmacist in an out patient department of psychiatry was well accepted and encouraged by the patients and psychiatric fraternity. Improved patient medication knowledge can lead to improved patient's insight and attitudes towards treatment. It has been proposed as an approach for directly addressing patient's knowledge and attitude concerning antidepressants.

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Table. 1 Demographic details of enrolled patients (n=44)

Characteristics	Numbers
Gender	
Male	22
Female	22
Educational status	
Literates	36
Illiterates	8
Previous counseling underwent by patients	
Yes	18
No	26
Medication counseling by health care professionals	
Doctors/Psychiatrist	18
Pharmacist	0
Nurse	0

Table 2 Assessment of medication knowledge: (Score range: 0-10)

Average Baseline score	Average first follow up score	Average second follow up score	p Value
4.59	6.43	7.31	p<0.01

Table 3 Assessment of Medication Knowledge in male: (Score range: 0-10)

Average Baseline score	Average first follow up score	Average second follow up score	p Value
5.09	6.59	7.54	p<0.01

Table 4 Assessment of Medication Knowledge in female: (Score range: 0-10)p

Average Baseline score	Average first follow up score	Average second follow up score	p Value
4.09	6.27	6.95	p<0.01

Table 5: Comparison of medication knowledge among gender

Gender	Average Baseline score	Average first follow up score	Average second followup score
Male	5.09	6.59	7.54
Female	4.09	6.27	6.95
Difference	1.00	0.32	0.59

Table 6 : Effect of educational status on medication knowledge:

Educational status	Average Base line score	Average first follow up score	Average second follow up score
Literates	4.68	6.56	7.50
Illiterates	3.50	5.50	6.12
Difference	1.18	1.06	1.38

Table 7: Distribution of knowledge

Q. No	Question	Base Line	First follow up	Second follow up	P value <than
1	What is the name of your drug?	10 (22.72%)	16 (36.36%)	25 (56.81%)	0.01
2	What is this drug taken?	25 (56.81%)	40 (90.90%)	41 (93.18%)	0.01
3	How does your drug work?	02 (04.54%)	07 (15.90%)	13 (29.54%)	0.01
4	When do you take this drug?	43 (97.72%)	43 (97.72%)	43 (97.72%)	1.00
5	How long do you have to take this drug?	03 (6.82%)	02 (04.54%)	04 (09.09%)	1.00
6	What precautions do you take while taking these drugs?	03 (6.82%)	20 (45.45%)	31 (70.45%)	0.01
7	What are the adverse effects of your drug?	25 (56.81%)	33 (75.00%)	37 (84.09%)	0.01
8	What will do if you get any adverse effects?	22 (50.00%)	37 (84.09%)	42 (95.45%)	0.01
9	What will you do when you miss the dose?	27 (61.36%)	38 (86.36%)	41 (93.18%)	0.01
10	How do you store your drugs?	36 (81.81%)	41 (93.18%)	42 (95.45%)	0.01

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