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Research Paper

PHARMACIST LEAD PATIENT COUNSELLING: IMPACT ON QUALITY OF LIFE IN ASTHMA PATIENTS

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Safe and effective drug therapy depends on patients being well informed about their medication. The proper use of drugs and patient education are vital for asthma management. Increasing patient's knowl-edge about their asthma therapy is a necessary component of asthma management. This study was carried out to assess the patient counseling impact on quality of life (QOL) in asthma patients using SF 36questionnaire. In this study a total of hundred patients diagnosed with asthma were enrolled by considering the inclusion and exclusion criteria. Out of this, 50 (50%) patients were in intervention and 50 (50%) patients in the control group. As per our study it was found that the predominant risk factor for Asthma was fumes and smoking was found to be the major risk factor in males. After patient counseling intervention group showed improvement in QOL from the baseline to1st and 2nd follow-ups. But control group doesn't show significant improvement in the QOL from the baseline to 1st and 2nd follow-ups. Physical activity and daily activity was also found to be increased during second follow-up in intervention group than in control group. Our study concluded that continuous education programs and counseling should be conducted for chronic diseases to emphasize and re-emphasize the importance of Quality of Life, to prevent recurrences, reduce progression of disease and ultimately minimize the hospitalization and there is a need of continuous pharmaceutical care services/ monitoring to improve the better quality of life.

Keywords: Patient counselling, Quality of life, Asthma patients, Chronic diseases

INTRODUCTION

Asthma is a chronic inflammatory disorder of the airways in which many cells and cellular elements play a role: in particular, mast cells, eosinophils, T-lymphocytes, macrophages, neutrophils, and epithelial cells. In susceptible individuals, this inflammation causes recurrent episodes of wheezing, breathlessness, chest tightness, and coughing, particularly at night or in the early morning (William Kelly H and Christine A, 2008). World Health Organization (WHO) estimates that 300 million people suffer from asthma (Kabila B

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and Sankar V, 2011). 2,55,000 people died of asthma in2005 and over 80% of Asthma deaths are reported from low and lower-middle income countries. In India, an estimated 57, 000 deaths were attributed to asthma in 2004 and it was seen as one of the leading cause of morbidity and mortality in rural India. India has an estimated 15-20 million asthmatics. It is estimated that the number of people with asthma will grow by more than 100 million by 2025 (World Health Organization, 2007). The prevalence of asthma has risen in affluent countries over the last 30 years but now appears to have stabilized, with ~10–12% of adults and 15% of children affected by the disease (Harrison's Principles of Internal Medicine, 2008).

Risk factors and triggers involved in asthma are Endogenous factors- Genetic predisposition, Atopy, Airway hyper responsiveness, Gender; Environmental factors- Indoor allergens, Outdoor allergens, Occupational sensitizers, Passive smoking, Respiratory infections; Triggers- Allergens, Upper respiratory tract viral infections, Exercise and hyperventilation, Cold air, Sulfur dioxide, Drugs (β-blockers, aspirin), Stress, Irritants (household sprays, paint fumes)

The correct use of drugs and education of patients are the vital for asthma management. Increasing patient's knowl-edge about their asthma therapy is a necessary component of asthma management. However, education alone has not been shown to have a beneficial effect on morbid-ity. Education programmes must look at modifying a patient's behavior and attitude to asthma. Counseling should lead to increased patient confidence in the ability to self- manage asthma, decreased hospital admission rates and emergency visits by primary care doc-tors, increased compliance and improved quality of life (Roger W and Cate W, xxxx).

Because asthma is a chronic but variable disease, patients and their families must be prepared to make lifestyle changes and adhere to drug therapy for long periods, even at times when symptoms are not evident. They must also be capable of making rapid decisions about symptom severity, self-medication and the need to seek medical advice (Ernst *et al*., 1996; The British Guidelines on Asthma Management, 1995).

Pharmacists can help patients understand that, with appropriate therapy, most patients can lead normal, productive, and physically active lives. Patients using inhalation therapies need careful instruction, including step-by-step demonstration. Pharmacists as part of the health care team, help improve the pharmacologic management of asthma by teaching patients about their medications, how to use them, and the importance of using them as prescribed.

Pharmacists are in an excellent position to provide advice or patient counseling to patients. Through patient counseling, a practicing pharmacist at the hos-pital or community pharmacy can establish an effec-tive therapeutic relationship and thereby improving the treatment adherence of the patients.[8]

Effective patient counseling aim to produce the following results

- Better patient understanding of their illness and the role of medication in its treatment
- Improved medication in its adherence
- More effective drug treatment
- Reduced incidence of adverse effect and unnecessary health care costs.
- Improved quality of life for patient
- Better strategies to deals with medication related adverse effects.

- Improved professional support between patient and pharmacist.

Since asthma is a allergic disease, preventive measures taken by patients plays an important role in improving lifespan and quality of life which can be done more efficiently by clinical pharmacist by providing patient counseling through improving knowledge of patient about disease, risk factors, medication management and preventive measures to control asthma. Unlike acute illness, the chronic illness requires hospital stay, self-monitoring, follow-up, life-long drug ther-apy, non-pharmacological measures and several life-style modifications. Therefore patient counseling has become a growing need in chronic illness.[9] and this present study was aimed to assess the patient counseling impact on quality of life in asthma patients.

METHODOLOGY

A prospective observational study was carried out for a period of ten months commencing from May 2016 through March 2017 in a tertiary care hospital at south Malabar region of Kerala State. The study was approved by the Institutional ethical committee of the hospital and an official consent was provided by the Managing Director for the purpose of conducting the study. Hundred patients diagnosed with asthma were enrolled in the study by considering the inclusion and exclusion criteria of the protocol as approved by the IEC.

Inclusion Criteria

- Male and female patients above 18 years.
- Patients diagnosed with bronchial asthma.

Exclusion Criteria

- Male and female Patients less than 18 years.
- Patients who are not willing to participate in the study.
- Patients with significant co-morbidity (e.g. heart disease, diabetes mellitus with complications, stroke, renal disease and chronic obstructive pulmonary disease).

Study Tools

Quality of life Questionnaire

- Quality of life is accessed by using **SF 36** questionnaire. Questionnaire consists 36 questions to access the quality of life in patients.

All the relevant details needed for the study were collected from the case record, medication charts and by direct interview. QOL of intervention group were recorded in SF 36 questionnaire at first and second follow up after patient counselling. QOL of control group is recorded in SF 36 questionnaire without counselling. Patients were educated to avoid asthma triggers such as allergens and irritants like pollen, cold air, animal dander, polluted air which can trigger asthma attacks. Patients were instructed about the proper techniques for inhaling medications. They were also informed about the smoking cessation.

Statistical test used for drawing conclusions are,

1. Students independent't' test for comparison of demographic variables.
2. χ^2 test for the testing the significance of association of qualitative variables.
3. Z test for comparison of proportions.
4. ANOVA for comparison of parameters in the study.

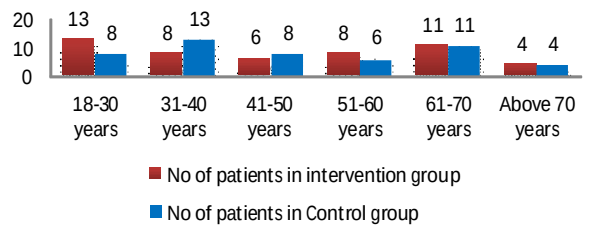
RESULTS

Column: 1 Age Distribution in Total Patients

Table 1: Age Distribution in Total Patients

Age in Years	No of Patients in Intervention Group	No of Patients in Control Group
18-30	13	8
31-40	8	13
41-50	6	8
51-60	8	6
61-70	11	11
Above 70	4	4

Figure 1: Age Distribution in Total Patients



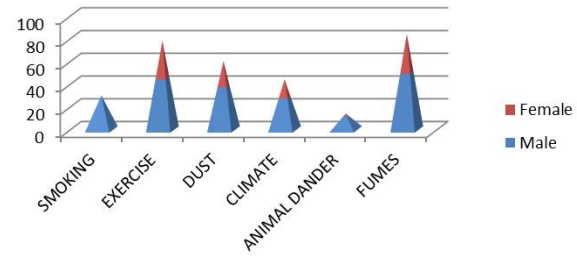
There is no significant difference in the mean age of male, female and combined in the intervention and control groups indicating that the two groups are comparable with respect of age. More asthma patients are found between the age 18-40 in control and intervention group.

Column: 2 -Patient Distribution Based on Allergic History

Table 2: Patient Distribution Based on Allergic History

	Male	Female
Smoking	30	0
Exercise	45	33
Dust	38	22
Climate	28	16
Animal dander	12	2
Fumes	50	34

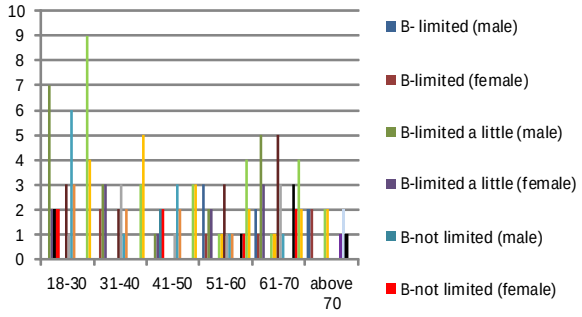
Figure 2: Patient Distribution Based on Allergic History



Fume was found to be the one of the major cause for asthma in males and females and smoking was found to be the major risk factor in males.

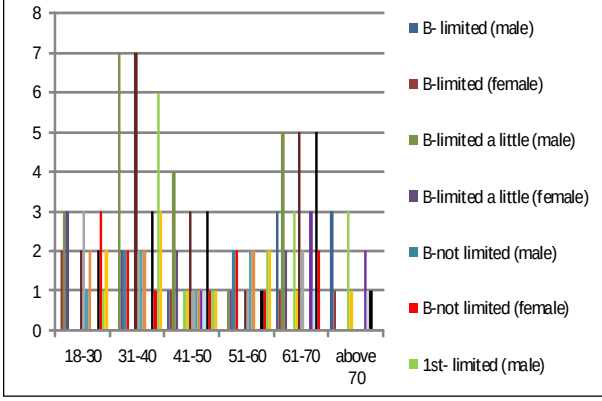
Patient Distribution Based on Daily Activity-Intervention Group

Figure 3: Patient Distribution Based on Daily Activity-Intervention Group



Patient Distribution Based on Daily Activity-Control Group

Figure 4: Patient Distribution Based on Daily Activity-Control Group



There is no significant difference between the two groups in base line and first follow up ($p<0.01$).In second follow up the not limited group, numbers in the intervention group is significantly higher than that in the control group ($p<0.01$) which indicates daily activity of the intervention group increases after the second follow up.

DISCUSSION

Asthma has been chosen in this study because of its impact on quality of life. QOL is becoming an important outcome measure in chronic diseases like asthma. The major therapeutic goal is to improve the daily functioning ability of these patients so that they can enjoy life to its fullest possible extent. This study results illustrate how general health physical activity, daily activity, social activity, body pain, and emotional role were affected in asthma patients. Sf-36 Questionnaire was used to measure the quality of life of asthma patients. This study was designed to assess the effect of a patient education programme aimed at improving patient's knowledge of asthma, inhaler technique and compliance. It was successful in improving the knowledge of patients. The findings showed a significant increase in knowledge of asthma during follow-up.

During the study period a total of 100 patients were enrolled, out of them 60 (60%) were males and 40 (40%) were females. The quality of life of the control and intervention group were compared for six months and at the end of study period it was assessed that there was a clinical as well as statistical significance seen in case of intervention group at the follow up 1st and 2nd follow-up, whereas the control group didn't show any clinical as well as statistical significance. These study correlates with the study carried out by Shakeel Ahmed *et al*., (2013).

Demographic and socioeconomic factors have been shown to be important determinants of health-related quality of life in asthmatic patients. These results correlates with the study of Benedicte leynaert *et al*., (2000).

In this study males was found to be more prone to asthma than females, it may be due to their life style and habits. Peoples in the rural area found to be more asthmatic than people in the urban area. This result correlates with the study of Rathan Shyam Met.al. [12] and this result was contradicted with the study of K V Ramanath et.al[13]in which female patients were found to be more prone to asthma than male patients.

While considering the risk factors fume was found to be the one of the major risk factor which causes asthma. In males, smoking was one of the major problems that cause asthma. Another major cause for asthma was found to be dust which correlates with the study of Rathan Shyam M *et al*. (2013).

Physical activity was found to be increased during second follow-up in intervention group than in control group this result correlates with the study of Shakeel Ahmed *et al*. (2013).

Daily activity was also found to be increased during second follow-up in intervention group than in control group. Increase in this physical activity and daily activity indicate the impact of patient counseling.

Our study concludes that pharmacist mediated patient counselling helped in better controlling of asthma and improved the quality of life in asthma patients. This study also emphasizes the potential of pharmacist to play an important role as patient counsellor, in the management of asthma patients.

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