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ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PRACTICES OF ASTHMA AMONG ASTHMATIC PATIENTS VISITING SOUTH INDIAN TEACHING HOSPITAL

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ABSTRACT

Introduction: Asthma is a global problem with a drastic increase in fatal and mortality rate as per WHO & UNICEF. This is caused either due to Global Warming or Immune Modified Senstivity to allergens. The Asthmatic patients undergoing the asthma management are either under treatment due to ignorance or distorted information or knowledge of patients about their disease. Objective - The study was aimed to assess the knowledge, attitude and practices of asthma among asthmatic patients. Methodology - A prospective interventional study was conducted among 86 patients visiting both OPD & IPD -General Medicine and Emergency ward at District hospital, Kalaburagi, for a period of 06 months. The data was collected by face-to-face interview and a suitably designed questionnaire was used to assess knowledge, attitude and practices at baseline before intervention and 15 days after the intervention using a pre/post-test design with the patients being their own controls. Results - The data of 86 patients were analysed in this study. Out of 86 patients, 56.9% were male and 43.1% were female. 34% patients had knowledge about their disease, the attitude score was 44.7% and practice score was 43.4% before counselling. After counselling, there was significant increase in KAP scores of the patients. Conclusion - The study concludes that the knowledge and practice scores were low, however they had favourable attitude towards their disease. Clinical pharmacist provided education had shown a positive improvement in patients knowledge, attitude and practices among asthma patients.

KEYWORDS: Asthma; knowledge; attitude; practices; patient counselling.

1. INTRODUCTION

Definition

Asthma is a chronic inflammatory disorder of airways in which many cells & cellular elements play a role: in particular mast cells, eosinophils, T-lymphocytes, macrophages, neutrophils and epithelial cells. In susceptible individuals, inflammation causes recurrent episodes of wheezing, breathlessness, chest tightness & coughing. These episodes are usually associated with airflow obstruction that is often reversible either spontaneously or with treatment. The inflammation also causes an increase in bronchial hyper responsiveness (BHR) to a variety of stimuli.[1]

Classification

The Classification of asthma varies depending on the various factors involved, Relapsation of Time duration, Severity of asthamatic attack,

Based on severity, classification of asthma by NAEPP,

Classification of Asthma Based on Severity

Components	Intermittent	Mild	Moderate	Severe
Symptoms	< 2 days/week	>2 days/week But not Daily	Daily	Throughout the day
Night time awakening	≤ twice per month	3-4 times per month	>once per week, but not nightly	Often 7 times per week
SABA use for symptom control	≤2 days/week	>2 days/week but not > 1 per day	Daily	Several times per day
Interference with normal activity	None	Minor limitation	Some limitation	Extremely limited
Lung function	FEV1 >80% FEV1/FVC normal	FEV1 >80% FEV1/FVC normal	FEV1 60%–80% FEV1/FVC reduced 5%	FEV1 <60% FEV1/FVC reduced 5%

SOURCE- Michael J Morris. Classification guidelines National Asthma Education and Prevention Program.

Prevention

A recent study revealed that the national burden of asthma was estimated at 17.23 million and the prevalence ranges from 0.4%-4.8%.[2]

India has 10% of asthmatics – An estimated 20 million people suffer from asthma in India. This is 10% of global burden of 200 million asthmatics worldwide. Every year there are 2

lakhs deaths due to asthma around the globe. The prevalence of asthma is 15 per cent in adults and 5 to 7 per cent in children in India.

As a key component of management guidelines in asthma is the recommendation for patient education.[3]

Patient education is becoming an essential area of service provision, with the increasing population of people with chronic disease and conditions requiring long term management in the community.[4]

Asthma patients should be made aware that a positive attitude towards treatment is pre-requisite for good disease management. From a medical point of view the lack of understanding about asthma may be crucial if the patient is unable to judge the severity of his/her disease symptoms or does not know the right treatment.[5]

The most important advantage of inhaler therapy is the direct, localized delivery of a high concentration of drugs to the airways with minimal systemic side effects. However, improper inhaler device use is one of the most common causes that hinder better asthma control. The improper inhaler technique is associated with poor asthma control and frequent ED visits.[6]

The knowledge, attitude and self-efficacy work together to add to the patients compliance with the treatment process.[7]

Assessment of the knowledge, attitude and medication adherence practice is crucial for the patients improvements and wellbeing as well as preventing them from complications.[5]

According to SHPA (2004), Pharmacists have a responsibility to provide sufficient information and counselling to enable patients and/or their careers to achieve the informed and judicious use of their medicines. Counselling is the sympathetic interaction between pharmacist and patient; it may go beyond the conveying of straight forward information about the drug and how and when to use it. The ultimate goal of this counselling is to provide information directed at encouraging the safe and appropriate use of drugs thereby enhancing therapeutic outcomes.[7]

Pharmacist's communication skills needs to be further developed into a more patient centered approach in order to take greater account of patient's perspectives and experiences in using

their medication. Finally, more research is needed to establish a solid evidence base for the impact of pharmacist's education and counselling practice on patients' medication adherence and treatment outcomes.

2. METHODOLOGY

Study Design: Prospective Interventional study, where the Subjects may receive diagnostic, therapeutic or other types of interventions. The assignment of the interventions may or may not be random. The individuals are then followed and biomedical and/or health outcomes are assessed.

Study Site: OPD & IPD – general medicine and emergency ward of district hospital, Kalaburagi. The study was conducted from October 2017 to March 2018 for a period of 6 Months in 86 Asthmatic patients. The Criteria for the selection of subjects is followed with > 18 years who are diagnosed with asthma and the Exclusion criteria for the selection of subjects is pregnant women, asthmatic patients with comorbid conditions and patients who are not willing to participate in the study.

Study Procedure: The study was conducted at District hospital, Kalaburagi after obtaining ethical clearance from Institutional Ethical Committee.

Pre-Intervention: Using a suitably designed data collection form, the socio-demographic details of the patient was collected through information provided in the case sheets and by interviewing the patient. -The base line KAP of the patients was re-assessed by the means of KAP Questionnaire of asthma. -After assessing the KAP of patients during pre-intervention, the patients had been counselled regarding the disease by means of direct counselling, educational leaflets, audio and video resources.

Post-Intervention: Follow up was conducted 15 days after assessing their baseline knowledge. Again the KAP of the patients was assessed using the KAP Questionnaire of asthma. -For most of the patients the follow up was done by face to face interview, only few were interviewed by contacting them through their contact numbers. Knowledge, Attitude and Practice Assessment: -The questionnaire was designed based on the parameters to be evaluated from the previously available questionnaires in the literatures. The questionnaire had three components with total of 24 questions. The first component of the questionnaire (10 questions) was aimed at collecting information about Knowledge on disease and medication

in patients. -The second component (8 questions) was aimed at collecting information regarding their attitude towards the disease and the third component (6 questions) was aimed at assessing the practices of the patient.

3. RESULTS

During the study period a total of 86 patients who were diagnosed with asthma were enrolled in the study.

6.1 Details of Gender wise Distribution of Patients

Out of 86 patients, 49(56.9%) were male and 37(43%) were Female.

The subjects are provided with an Assessment sheet or Questionnaire sheet to draw out the KAP among the subjects before and after the Interventions.

The Questionnaire format include the following questions and the data retrieved from the subjects during Pre Intervention and Post Intervention

Table 21: Assessment of knowledge towards asthma among patients.

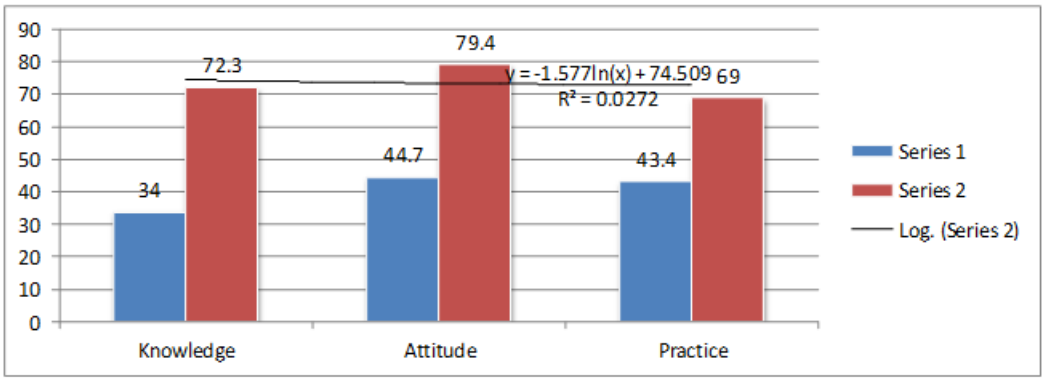
S.	Knowledge Questionnaire	Pre Intervention		Post intervention	
		Yes	No	Yes	No
1.	Do you know what is asthma ?	54.6	45.4	70.3	29.7
2.	There are no disadvantages for asthma patients in being in close contact with cats and dogs ?	15.6	84.4	67.1	32.9
3.	Coughing & difficulty in breathing are the common symptoms of asthma ?	67.1	32.9	96.8	3.2
4.	The peak expiratory flow meter is used to measure respiration ?	1.5	98.5	54.6	45.4
5.	Smoking can worsen asthma ?	40.6	59.4	78.1	21.9
6.	Medicines used for asthma helps in reducing inflammation of air pipes ?	29.6	70.4	87.5	12.5
7.	Medicines used for asthma attacks constrict bronchi ?	62.1	37.9	60.9	39.1
8.	Medicines used for asthma may have to be used even when I am having asthma ?	31.2	68.8	71.8	28.2
9.	Do you know the complications of missing dose ?	14	86	68.7	31.3
10.	Do you know how to use inhalers ?	50	50	82.8	17.2

Table 22: Assessment of Attitude towards asthma among patients.

S.	Attitude Questionnaire	Pre Intervention		Post intervention	
		Yes	No	Yes	No
1.	I enjoy my life even though I have asthma ?	31.2	68.8	82.8	17.2
2.	I do everything without considering its effects on my asthma ?	37.5	62.5	73.4	26.6
3.	Without asthma symptoms I am still worried about asthma attacks ?	40.6	59.4	76.5	23.5
4.	I think I need more information about asthma and its management ?	82.8	17.2	78.1	21.9
5.	I am not worried when others come to know that I have asthma ?	59.3	40.7	82.8	17.2
6.	There are no problems with my asthma management ?	26.5	73.5	76.5	23.5
7.	I always remember to take my medicines ?	46.5	53.5	75	25
8.	I feel embarrassed using the inhalation device and my asthma medicines in public places ?	21.8	78.2	73.4	26.6

Table 23: Assessment of practices of asthma among patients.

S.	Attitude Questionnaire	Pre Intervention		Post intervention	
		Yes	No	Yes	No
1.	You make sure that the house is free from dust ?	73.4	26.6	90.6	9.4
2.	You follow certain home remedies for asthma ?	57	43	68.7	31.3
3.	You practice yoga to prevent asthma attacks ?	09	91	50	50
4.	You avoid going out in cold weather ?	75	25	93.7	6.3
5.	You visit your physician regularly ?	25	75	57.8	42.2
6.	Do you drink warm water before sleep ?	17.1	82.9	57.8	42.2



4. DISSCUSSION AND SUMMARY

During our study period, a total number of 86 patients were enrolled into the study. In our study, both gender were affected almost similar, though slight differences in prevalence between males and females have been reported, with males 49(56.9%) predominant over females i.e;37(43%). In our study 32 (37.2%) of were of advancing age (>60 years).

Generally children and advancing age group i.e; above 60 years or elderly are at high risk of developing asthma. Most of the patients are from rural area 57(66.2%) and 29 (33.7%) are from urban. In our study, most patients are illiterates 44(51.1%) followed by 18(20.9%) primary and 13(15.1%) secondary education and only a few i.e; 11(12.7%) were graduates. Occupational asthma is induced by an agent inhaled at work place and can aggravate pre-existing asthma. The significant finding of our study is increased risk of asthma associated with occupational exposure like hotel worker, household dust, cooking fuels & fumes exposure. In our study, majority of the patients i.e; 31(36%) had past medical history of above 10 years. This indicates that inappropriate knowledge about the disease and medications and non-adherence to the medication is the reason for the uncontrolled asthma and increased hospitalisations due to exacerbations.

In our study, labours and workers especially who work in cement factories 36(41.8%), 20(23.2%) agricultural workers, 17(19.7%) employees were the foremost affected patients. This could be the major risk factor for occupational asthma. In this study majority i.e.; 32(37.2%) are smokers followed by tobacco chewers 17(19.7%) and alcohol. On multivariate analysis of pooled data from all centres, history of use of any smoking product is associated with bronchial asthma. In our study, 15(17.4%) had the family history of asthma. Family history of asthma in first-degree relatives was consistently identified as a risk factor of asthma. In our study, majority of the patients are allergic to dust 34(39.5%), dust + climate 23(26.7%), followed by pollen allergy, animal dander and food. In our study, the knowledge of patients regarding the disease and medication is low i.e.; 34% were unaware of the disease, however they had positive attitude 44.7% towards their disease. Our results showed that higher asthma knowledge correlates with higher level of education.

In our study, the patients with low level of knowledge and negative attitudes did not follow certain practices to control of asthma where as people with positive attitude and better knowledge, practiced certain activities to keep their asthma in control. In our study, most patients had been admitted in the emergency ward 39(45.3%) with exacerbations, this is due to their low levels of knowledge, attitude and practices which are necessary to keep their asthma in control. Patient counselling is one of the most important aspects in developing patients knowledge about disease, management, precautions and improving over-all quality of life. After counselling, the knowledge, attitude and practices of patients were assessed based on KAP Questionnaire and the results showed significant improvement in knowledge

72.3%, positive attitude 79.4% and practices 69% regarding the disease, risk factors, management precautions. The pharmacist provided education showed a positive and effective improvement in patients knowledge, attitude and practices of asthma patients which helps them to lead a quality life with self – management of asthma.

5. CONCLUSION

In our study, the majority of the patients had lack of knowledge, positive attitude and low practices to control their disease which leads to decreased quality of life and increased severity of the disease. Greater understanding about the illness and a change in attitude and practice would result in better therapeutic outcomes. Therefore, asthma education strategies are recommended depending on the educational level of asthmatic individuals. Our study concluded that most of the patients were from rural area and illiterates and had been admitted in emergency ward due to acute exacerbations. This shows that there is significant relation between knowledge and management of the disease. Our study concluded that there is significant improvement in most of the patients knowledge, attitude and practices scores after the counselling regarding the disease, preventive measures and risk factors, where few elderly were not able to improve their quality of life due to poor memory. Our study concluded that there was positive impact of clinical pharmacist provided patient counselling in disease management program which will help to maintain normal daily activity of asthmatic patients by improving their quality of life(QOL).

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