DOI: 10.55522/jmpas.v5i1.0076 ISSN NO. 2320 – 7418

International peer reviewed open access journal

Journal of Medical Pharmaceutical and Allied Sciences

Journal homepage: www.jmpas.com CODEN: JMPACO

Research article

Evaluation of control therapy and drug utilization in asthma patients in a multispecialty hospital

Aravamuthan Anandhasayanam*, Subramaniam Kannan, Bince Vinoy, Annamalai Tamilselvan

Department of Pharmacy Practice, JKKMMR3Fs AJKK SA College of Pharmacy, Komarapalayam, Tamilnadu, India

Corresponding author: Aravamuthan Anandhasayanam, ✉ jkkmanandha@gmail.com,

Department of Pharmacy Practice, JKKMMR3Fs AJKK SA College of Pharmacy, Komarapalayam, Tamilnadu, India

Received – 10 October 2015**, Revised** – 20 November 2015, **Accepted** – 25 February 2016 **(DD-MM-YYYY)**

Refer This Article

Aravamuthan Anandhasayanam, Subramaniam Kannan, Bince Vinoy, Annamalai Tamilselvan, 2016. Evaluation of control therapy and drug utilization in asthma patients in a multispecialty hospital. Journal of medical pharmaceutical and allied sciences, V 5 - I 1, Pages -290 – 292. Doi: https://doi.org/10.55522/jmpas.V5I1.0076.

ABSTRACT

There was no detailed information on control therapy assessment and drug utilization in Asthma patients in South India. Evaluation of Asthma control therapy and drug utilization pattern in Asthma patients. The study was conducted at the CO- OPERATIVE Hospital, located in Thalipparamba village, Kannur. This is a questionnaire based prospective study over a period of 9 months. The clinical outcomes, the therapy & the control of asthma from the given therapy were recorded with the demographic details by an interview. 200 adult patients participated, out of which 53% were women and 47% were men. Spiro metric study showed that out of 200 patients 31.5% had mild Asthma and 41% had moderate Asthma and the remaining 27.5% had severe Asthma. Based on the questionnaire survey most of the people faced the different symptoms of Asthma like, various morning disturbances (87.5%), Limitation of activities(96%), Sleep disturbances (14%).Out of 200 people 87.5 % people felt frustrated. 93.5 % people wheeze &92 % were in different stages of chest tightness. The study concluded that most of the patients do not have the knowledge about Asthma, presentation measures, and risk factors, the therapy methods to reduce the risk factors. The severity of asthma among the total population of 200 asthmatic patients showed that 27.5% of them had severe FEV1. 14% of people were unable to sleep because of asthma trouble during the night hours. 1% of asthmatic patient showed totally limited and 2% of people wheezed all the time. The drug utilization in that total asthmatic patients showed that 46% of people used inhalers out of that 5.5% of them took more than 2 puffs a d. The drug therapy regimen in this study revealed that 47.5% of patients treated with more than two drugs and it reveals that asthma in such patients was not controlled by a single drug therapy.

Keywords: Asthma control therapy, Drug utilization study, Pharmacist observation.

INTRODUCTION

Asthma is one of the common non- communicable diseases.It is the 14th most important disorder in the world in terms of extent and duration of disability. The most recent revised global estimate of Asthma suggested that as many as 334 million people had Asthma [1]. Out of that 14 % were children. % of the young adults (aged 18-45) experiencedAsthma symptoms. Out of that 4.5 % had been diagnosed with Asthma and treated. Asthma was troublesome for children between age group of 10-14 as well as elderly people with age between 75-79. Asthma can be easily diagnosed and treated. It creates substantial problem to individuals and families and often restricts individual activities throughout the life. The appropriate management of Asthma enable people to enjoy a good quality of life [2].The attempt had been made to evaluate the patients to control Asthmaand the treatment with drug utilization. The study was conducted in kannor CO-OPERATIVE Hospital Thalipparamba village, Kerala during 2014 to 2015. A set of 200 patients with the symptoms of Asthma were selected for the survey using the specially prepared questionnaires. The study was aimed to the evaluation of Asthma control therapy assessment and drug utilization.

The triggering factors that can contribute to Asthma may include any of the following:

Viral respiratory infections

Exercise; hyperventilation

Use of beta-adrenergic receptor blocker (including ophthalmic preparations)

Obesity

Aspirin or non-steroidal anti- inflammatory drug hypersensitivity, sulfate sensitivity

Environmental allergens (house dust, animal allergens, and fungi)

Environmental pollutants, tobacco smoke

Allergic reaction to some foods, such as peanuts or shellfish

Irritant such as household sprays and paint fumes

Physical activity (exercise induced Asthma)

Cold air

Air pollutants and irritants, such as smoke

Strong emotions and stress

Respiratory infection, such as the common cold

Parental factors like prematurity and increased maternal age increase the risk of Asthma.

Aim and Objectives of the Study

The study focuses to the evaluation of Asthma control therapy and drug utilization in Asthma patients in a multi-specialty hospital.

OBJECTIVE

To find out the severity of Asthma in patients

To assess the medication use in the patients suffering fromAsthma

To assess the Asthma control in patients

Methodology

The Institutes Ethics Committee approvedthe study and informed consent was taken before starting the observations.

Study Site

The patients were analyzed from the outpatient and inpatient department of the Co-operative hospital, manna, located in Thalipparamba village, Kannor.

This hospital was known to provide Modern and Efficient Asthmatic care in Kerala.

Study Design

This was a prospective questionnaire-based study.

Study Period

Nine months prospective observational study.

Total No. of Population

Total no. of patients : 200 patients Female 94

Male 106

Study Criteria: Inclusion Criteria

Patients of either sex of age group 18 to above 65 years.

Individuals with current diagnosis of Asthma

Who were with the history of Asthma?

Individual's withatleast 3 months of duration of breathing illness

Exclusion Criteria

Mentally retarded patients

Patients who had multiple illnesses

Pregnant and lactating women

Patients who were having other pulmonary complaints like TB

Source of Data

The patient's clinical data therapeutic data and allother relevant and necessary data were collected from:-

Patient case note

Interview with the patients

Patient spirometry chart

KAP Questionnaire

Study Procedure

The study was conducted by using standardquestionnaire. All necessary information were collectedusing "Patient data collection form"(Basically a KAP questionnaire) which includedpatients details, signs and symptoms,Spirometric test results etc., The questionnaire also included questions on recent past history of asthma in the last w, disturbances in night, disturbances in morning, limitation of activities,shortness of breath because of Asthma etc.

Ethical approval for the study was obtained from the institutional ethics committee. Confidentiality and anonymity of the patient information was maintained during and after the study period. The patients were asked for verbal consent to participate in the study before fillingthe informed consent form [3, 4].

RESULT AND DISCUSSION

Gender wise distribution

From the questionnaire Out of 200 Asthmatic patients 106 (53%) female and 94(47%) male were interviewed. Comparing sex wise distribution female Asthmatic patients were found more than male Asthmatic patients.

FEV1% Predicted Wise Distribution

The Spirometric study shows that out of 200 cases 63(31.5%) had mild FEV1% predicted,82(41%) patients had moderate FEV1% predicted, and 55 (27.5%) had severe FEV1% predicted.

Asthma Control Questionnaire

The Average Effect of Asthma during the Past Week and How Often the Patients Wakeup by Asthma Trouble During the Night Hours

Among the study of 200 patients 14% of people were unable to sleep because of Asthma, 56% of people were affected by sleep disturbance but 2.5% did not have any disturbance at night.13.5% were disturbed several times, 6% weredisturbed many times, 13% were disturbed few times.

The After Effects of Asthma on the Patients at Rise

12.5 %of people did not have any morning disturbance, 26.5% had very mild symptoms, and 21% had the mild symptoms and 15% people had moderate symptoms, 14.5% had severe symptoms and 1% had very moderate symptoms. This research reveals that out of 200 patients 87.5% of people faced different type of morning sickness due to Asthma.

Limitation of Normal Activities Due To Asthma

In the survey out of 200 people 96% of people had different type of limitation of activities the other 4% of patient did not have any limitations. Out of total 96%of patients 45.5% felt very slightly limited, 29.5% felt slightly limited, 7.5% expressed moderate limitation, 9.5% very limited, 3% extremely limited and the balance 1% were not able to do even the normal activities because of Asthma.

The Effect of Breathing Inconvenience due to Asthma

In this study 4.5%of people were not affectedby breathing difficulties. The other 54.5% felt it very little, 21.5% felt it little, 6.5%.

Frustration Due To Asthma

In this survey out of 200 people 22.5 % of people were not feeling frustrated. The remaining 19.5% felt very little, 25% felt little, and 10% felt moderate, 15.5% quite a lot, 7% felt a lotand the other5 % felt very lot. This study reveals that77.5% patients felt frustration.

The Effect of Wheezing

In this study 6.5 % of people did not wheeze but the other 45% were felt hardly any of the time,2% a little of the time, 20.5% wheeze some of the time,6.5% wheeze a lot of the time, 7.5 most of the time and the remaining 2% wheeze all the time.This surveyrevealed that out of 93.5% patients had some or other wheezing troubles. felt it moderate, 5.5% felt quite a lot of inconvenience,2.5% felt that a great deal of inconvenience and the other 5% were affected a lot. Out of 200 patients 95.5% patients were affected by the shortness of br.

The Effect of Chest Tightness Caused By Asthma

In total, 92 % of the study population felt chest tightness. 44% experienced chest tightness hardly, 12% suffered little, 13.5%felt sometimes and 19% experienced tightness of chest frequently and 1.5%were affected by chest tightness all the time eath in different levels.

The Effect of Short Acting Bronchodilators Due To Asthma

The survey reveals that most of the patients does not use inhaler before the first visit. 100 patients (66.5%) did not use an inhaler. The remaining 28% used one or two puffsall the day. The remaining 5.5% of patients took more than two puffs a day [5, 6].

CONCLUSION

The main understanding about the illness and the change in attitude and practice would in turn result in a better therapeutic outcome our study revealed that most of the patients had lack of knowledge about thedisease, and the risk factors, preventive measures, drug therapyto be taken during the disease that leads to compromised quality of life. The severity of asthma among the total population of 200 patients showed that 27.5% of them had severe FEV1. 14% of people were unable to sleep because of asthma trouble during the night hours and 87.5 % of people faced different types of morning sickness. The analysis of limitation of normal activities in the total population showed that 1% of asthmatic patient showed totally limited and 2% of people wheezed all the time.

The drug utilization in that total asthmatic patients showed that 46% of people used inhalers out of that 5.5% of them took more than 2 puffs a day. The drug therapy regimen in this study revealed that 47.5% of patients treated with more than two drugs. 35% of asthmatic patients used beta agonists, which had been observed to be the primary drug used for treating asthma.The proper control therapy, drug utilization, and counseling of Asthma resulted in better outcome of the analyzed patients.

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