A Study on The Impact of Pharmaceutical Care on COPD Patients

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ABSTRACT

Background: COPD is a respiratory condition that impacts the respiratory tract in the lungs

Aim & Objective: To study the impact of pharmaceutical care on COPD patient

Materials and Methods: A prospective interventional study was conducted for 6 months period at a private hospital in Palakkad.MMAS8 was used to analyze medication adherence and the EQ-5D-3L questionnaire was used to assess QOL. The collected cases were entered in MS Excel 2007&Descriptive statistics were performed. Results & Discussion: 150 participants with ages>18 diagnosed with COPD disease were included in the study. Out of 150 patients, every single, one is COPD positive. 105 individuals in this study are men (45%) and 45 patients were female (30%).70 of the 150 patients (or 46%) are in the 51–60 age range. According to the MMAS-8 scale, of the initial 150 patients, 85 had low baseline adherence (56.6%), and that number has since increased to 98 patients (65%).
Conclusion: The medication adherence and PSQI have been increased after the intervention.

Keywords: Mo risky medication adherence scale (MMAS8), Pittsburg sleep quality index (PSQI), Chronic obstructive pulmonary disease (COPD).

INTRODUCTION

 Chronic obstructive pulmonary disease it ids an irreversible disease in lungs it may cause an increase in the mortality in all over the world it is one of the major leading causes of the death after the heart disease and cancer disease[1]. medication adherence is one of the major task in the severe case of the copd patient. Chronic obstructive pulmonary disease mostly affect the aged patients of above 60. Patient with the low educational level may have an great task in the medication adherence because patient with low educational Level have an less awareness about the disease. once if the patient was affected by the copd it cannot be reversible but can be treatable. Medication adherence is the process of pharmacist who gives the counselling to the patient about their diseases, and drug uses.in COPD patients they are taking inhalations and some steroidal drugs proper counselling is needed for the patient who are all taking the inhalators. Because proper inhalational methods will reduce the severity of the disease[2]. Patient with poor educational level are unable to understand the inhalation process so the demo method is needed for the those patient. Proper drug use may increase the patient medication adherence level. Now a days patient medication adherence level are increased due to an various health care program was conducted and knowledge was provided by the health care workers. So medication adherence is an important process to reduce the patient severity of the disease and it may also increase the patient quality of the life .

 Sleep quality in the COPD is an major task due to an exacerbations in patient. Patient with an increased in the age is also affects the sleep quality and the increase in the severe of the disease may also affects the sleep quality. In this methods patient sleep quality was measured by the Pittsburg sleep quality index. This method is used to measure the sleep quality of patient previous month sleep quality.it is an interventional study to measure the patient sleep quality of past and pre intervention conducted by the pharmacist. Its is an 6 month interventional study to analyze the sleep quality of the COPD patients [3]

METHODOLOGY

A prospective interventional study was carried out at pulmonology department in Rajiv Gandhi co operative multispecialty hospital, Palakkad for the period of 6 months from july 2022 to January 2023.The sample size was 60 patients. The patients selected based on the inclusion criteria and exclusion criteria .The patient age of greater than 18 and diagnosed with COPD. Patient with are without co-morbid condition. The exclusion criteria are the patient not willing to give the consent for the study. The patient with critically ill.

After obtaining an approval from the institutional Ethics committee. The signed informed consent form will be taken from the patient prior to the study. After obtaining an consent from the patient A pre designed patient data collection form will be used to collect the patient required information. The collected information will be entered in MS Excel 2007 for calculating the percentage of various parameters. The patient sleep quality and medication adherence are measured by using the 2 methods (pittsburg sleep quality is used to measure the sleep quality of the patient) (MMAS-8 M.orisky medication adherence scale) . High adherence 8, medium adherence 6-<8, low adherence.

In Morisky medication adherence scale is a structured a self-reported measure of medication taking   behavior of the patient. As same, as that of the quality of life the pharmacist to measure the patient have a positive symptoms or negative symptoms after the intervention conducted a 2-month interventional study.

Pittsburg sleep quality index contain 9 set of questions the question is relate the patient past month sleep quality .this methods are used only in the adults it was differentiate from 'poor'from good sleep quality by measuring the 7 components this method is used to identify the sleep quality,sleep latency,sleep duration, habitual sleep efficiency,sleep disturbances, use of sleep medications,and day time dysfunction over the past month.

RESULT

BASED ON GENDER

Sl no	Gender	No of patients (n=150)	Percentage (%)
1	Male	105	70
2	Female	45	30

BASED ON AGE

Sl no	Age in years	No of patients	Percentage (%)
1	20-30	2	1.33
2	31-40	5	3.33
2	41-50	13	8.66
4	51-60	70	46.6
5	61-70	40	26.6
6	>70	20	13.3

BASED ON EDUCATIONAL STATUS

Sl no	Educational status	No of patients	Percentage (%)
1	Below high school	30	20
2	Above high school	80	53.3
3	High school	40	26.6

BASED ON SMOKING HABITS

Sl no	Social habbits	No of patients	percentage
1	Current smoker	90	60
2	Past smoker	50	33.3
3	Non smoking	10	6.6

BASED ON SMOKING DURATION

Sl no	Smoking duration (years)	No of patients	Percentage (%)
1	<3	40	26.6
2	3-5	36	24
3	>45	74	49.3

BASED ON THE DURATION OF THE COPD

Sl no	Duration in years	No of patients	Percentage (%)
1	<3	20	13.3
2	3-5	88	58.6
3	>5	42	28

BASED ON THE SYMPTOMS

Sl no	Symptom	No of patient	Percentage (%)
1	Cough	73	48.6
2	Wheezing	10	6.66
3	Chest pain	20	13.33
4	Breathlessness	10	6.66
5	Body pain	5	3.33
6	Cough+ wheezing + breathlessness	20	13.33
7	Cough + wheezing + breathlessness+ chest pain	12	8

BASED ON MMAS-8 SCALE

SL NO	No of patients (B_0)	Percentage (%)	No of patients (F_0)	Percentage (%)
Low adherence	85	56.6	17	11.3
Medium adherence	40	26.6	35	23
High adherence	25	16.6	98	65

BASED ON PITTUSBURG SLEP QUALITY

PSQI	Total no of patients	Percentage (%) baseline	Total no of patients	Percentage (%) Follow up
Good sleepers (<5 score)	45	30	120	80
Poor sleepers (≥5 score)	105	70	30	20

DISCUSSION

The study finds that male patients are increase in the percentage may be due to an cigarette smoking and tobacco uses. And the study shows that majority of the patient comes in to the age group of > 60 might be due to the cigarette smoke in their adult stage/ 80% patient have an educational level of an high school. Based on their smoking habits 60% of patient have an habits of current smokers . 49.3% of patients smoking more than 5 years. On duration of COPD 58.6% patient have an duration of 3-5 years. 48.6% of patient have an symptom of cough. Based on the MMAS scale 85% of patient have an low adherence in their baseline study and it increase in to 65 % in high adherence after the intervention conducted by the pharmacist. Pittusburg sleep quality index 70% of patients shows poor sleep quality in their baseline study and its increase in to 80 %after followup

CONCLUSION

The medication adherence and sleep quality has been increased after the intervention conducted by the pharmacist.

LIMITATIONS

The study limited less sample size and due to sever case of COPD patients are unable to answer the questions and some interviews are conducted to the bystanders,

CONFLICT OF INTERST

The authors have no conflict of interest regarding the study

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