

Knowledge about the Disease and Management in Patients with COPD- A Preliminary Report

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Abstract:

Background

In spite of a growing recognition of COPD as an important health problem, there was no retrievable study identified the depth of patient's awareness about COPD in India. As most of the persons with COPD come under economically weaker section the knowledge of the disease and the method of managing is highly challenging. To assess the knowledge about disease and disease management in subjects with COPD.

Methods and Material:

The study is a cross-sectional survey, conducted at JSS hospital, Mysuru. BCKQ questionnaire contained 13 topics (65 questions) was used to assess the knowledge about the disease and disease management among COPD patients. Seventy three patients participated.

BCKQ questionnaire contained 13 topics (65 questions) which was translated to local language (Kannada) and validated. The data was collected from COPD patients consulting pulmonology OPD, patients admitted to ward and from patients engaged in exercise intervention. Descriptive statistics was used for analysis.

Results:

The percentage of subjects answered correct was 33%. The percentage of subjects answered wrong was 67%. This result indicates that the COPD subjects had poor knowledge about the disease and its management

Conclusions:

Patient's education needs to be incorporated into the standard healthcare practice and policies through which the patients understand the benefits

of drug action, know how to manage breathlessness, and understand about improvement in symptoms by practicing the same. This in turn will improve their self-management skills and therefore the quality of life.

Keywords

COPD, Knowledge, disease management, questionnaire

Introduction

Chronic obstructive pulmonary disease (COPD) is a progressive disease involving the airways or pulmonary parenchyma resulting in airflow obstruction. COPD is defined as a preventable and treatable disease, with some significant extra pulmonary effects that may contribute to the severity in individual patient.¹ COPD is the fourth leading cause of death worldwide². It represents 5% of all deaths globally and by 2020. In India, 30% of the patients seen in chest clinics on an outpatient basis and 1-5% of hospital admissions are patients of COPD.^{1, 3, 4}

A study done on prevalence of COPD in Mysore, (900 adults surveyed), the total prevalence of COPD was 7.1%. Males had a higher prevalence (11.1%) compared to females (4.5%).²

COPD may overload the healthcare system and increase healthcare expenditure. Studies have found that an Indian COPD patient spends about 30% of his income on disease management. The studies have shown that patient education regarding their

condition, warning signs and symptoms, pathology, and treatment is believed to be the key element of successful treatment.

In recent years, there has been increased emphasis on education of patients and their families in medical conditions. This has been driven in part by patients wishing to be better informed about their condition and in part by the recognition by health professionals, that self-management is important to patients.³

Patients, who were involved in self-management programs and utilized action plans effectively, understand their illness and its treatment. These in turn prevent hospitalization and improve health-related quality of life.^{5,6} A study done on assessing information needs and the knowledge of patients with COPD, concluded that there was need for more information, and that a knowledge gap was identified in self-management strategies.

The existing literature suggests that the prevalence of COPD is high amongst the Indian population and shows a variation among different geographical areas of the country.^{[7] [8] [9]}. India is a large heterogeneous country with differing cultural and socioeconomic background and a recent review on COPD.^{10, 11, 12} The information regarding the knowledge of COPD in India is patchy at best and large parts of the country have not been covered under education strategy.

There is a paucity of studies assessing the level of awareness about the disease. In spite of a growing recognition of COPD as an important health problem, there was no retrievable study identified the depth of patient's awareness about COPD in India. As most of the persons with COPD come under economically weaker section the knowledge of the disease and the method of managing is highly challenging. The aim of the study is to evaluate the awareness about the disease and its management amongst subjects with COPD. Therefore the purpose of the study is to assess the knowledge about disease and disease management in subjects with COPD.

Methodology

The study is cross sectional study design. Sampling technique is convenience sampling. Data were collected from patients admitted to JSS hospital pulmonology ward and from patients who came for consultation at JSS pulmonology as outpatient. Approval for the study was obtained from JSS Medical institutional Ethical Committee, Mysore. Permission was taken from the author to translate the

BCKQ (Beck COPD Knowledge questionnaire) questionnaire to Kannada. The questionnaire was validated after translation to Kannada.

Translation of the questionnaire from English to Kannada was done as per the guidelines. The translation of the scale from English to Kannada was done by 1st individual. Translated Kannada version was re-translated to English and matched with original scale by 2nd individual. Translated English version was translated to Kannada by 3rd individual and matched with initial Kannada translation. In the end, it was matched with the initial translated Kannada version by 4th individual.

The questionnaire contained 13 topics, each with five statements giving a total of 65 questions. These topic covered epidemiology and physiology, etiology, common symptoms, breathlessness, phlegm, chest infections, exercise, smoking, immunization, inhaled bronchodilators, antibiotics, oral steroids and inhaled steroids. The response for the questions by subjects were to mark "true", "false" or "don't know".

The instruction was that the answers will help us to find out what information they need to help them to understand and manage their lung condition. The subjects were told to mark the circle which they thought is the correct answer. Correct responses to questions were scored +1 and 0 otherwise. This questionnaire has been designed to find out what the subjects know about their lung problem. It requires 10 to 20 minutes for completion.

Patients diagnosed with mild to severe COPD (as per Global Initiative for Chronic Obstructive Lung Disease gold criteria) referred by pulmonologists and physicians and having COPD more than 3 years were included in the study. Those with a perceived inability to complete the questionnaire were excluded.

One hundred and two subjects were approached. Twenty nine were excluded because they did not meet the inclusion criteria. It was found that no subjects had difficulty in understanding how to complete the questionnaire and all the subjects considered the questions asked to be relevant, clear and unambiguous.

Results

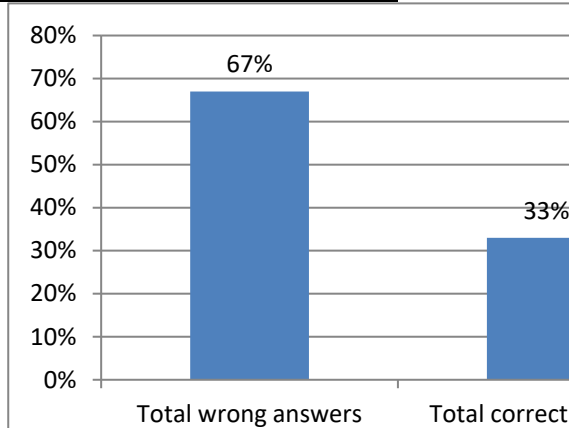
The data were available for 73 subjects. The female subjects were 8 in number and male were 65 (table 1). The mean age was at the range of 56years to 83years (table 2).

Table 1. Characteristics of the participants

Male	n= 65
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Female	n= 8	
Age	Male	58-83 yrs
	Female	56-74yrs

Figure 1. Profile of knowledge about disease and management among participants



The percentage of subjects answered correct was 33%. The percentage of subjects answered wrong was 67%. This result indicate the COPD subjects had poor knowledge about the disease and its management.

Table 3. Percentage of the 73 participants given correct response for all 65 Items indexed by 13 topics.

This table represents the correct response given by the subjects for each questions of 13 topics (65 items).

Topic	a	b	c	D	e	Total	% of correct answers
1 Epidemiology	12	24	34	23	26	119	33%
2 Aetiology	68	69	19	23	43	222	61%
3 Symptoms	16	33	69	24	56	198	54%
4 Breathlessness	12	66	11	21	19	129	35%
5 Phlegm	56	17	55	20	18	166	45%
6 Infections	18	43	44	13	13	131	36%
7 Exercise	20	13	12	9	13	67	18%
8 Smoking	45	55	23	12	5	140	38%
9 Vaccination	12	12	10	23	5	62	17%
10 Inhaled bronchodilators	44	12	24	21	13	114	28%
11 Antibiotics	12	26	13	19	45	115	32%
12 Oral steroids	11	5	10	13	7	46	13%
13 Inhaled steroids	5	4	34	23	6	72	20%

Discussion

This questionnaire had answer option as 'yes/no/don't know' which would be more acceptable for patients, easy to score and therefore, suitable for routine use in both clinical and research settings. Discovering what patients really know, or unsure about, or think they know but in fact do not know is of fundamental importance. To avoid 'forced' responses, a third option 'don't know' is included. This is the strength of the scale. The chosen topics included in the questionnaire were those that a patient with COPD were expected to be aware. [13]

The score of aetiology (61%) and symptoms (54%) were above average. The questions of this domain were smoking and occupational dust expose as a cause for which the subjects become more aware of the symptoms or complaints that affect their day-to-day life, and increased frequency for a consultation with a physician. Sixty eight people had answered correct for smoking being the cause for 80% of COPD and 69 subjects answered occupational dust exposure can cause COPD which shows they are aware about the cause.

Average and below average response rate for the questions about the epidemiology of COPD was (33%), breathlessness (35%), phlegm(45%), infections (36%), smoking (38%), inhaled bronchodilators (28%) and antibiotics(32%). These findings may point towards insufficient importance being given to patient education [14] as a part of healthcare intervention for COPD. Bronchodilators being the first line of management only 28% subjects had answered correctly about how it works, used and its side effect.

The level of awareness in domains like exercise(18%),vaccination(17%), Oralsteroids (13%) and Inhaled steroids(20%) were below average. The questions on “exercise was if walking was better than

breathing exercise to improve fitness”, only 20 subjects answered correct, for “exercise should be

avoided as it strains the lungs”, only 13 subjects answered correct, for “exercise can help maintain your bone density” only 12, for “relives depression” only 9 and for “exercise should be stopped if it makes you breathless” only 13 subjects answered correct. Though the evidence for exercise intervention stands high for COPD the knowledge and importance about it is poor. Lack of knowledge about exercise may be attributed to several factors like primary consultants being averse to physiotherapy referral for exercise intervention and a lack of awareness among the general population about the role of the exercise in the management of COPD.

Only 17% of the subjects answered correct for questions about vaccination. The vaccination for flu is advised only in hospitals but not in polyclinics and primary health centers in India which could be the reason for this response. Vaccination for flu is one of the recently added standards of care for COPD patients, which could also be the reason for less knowledge about vaccination.

The subjects had least knowledge about the steroids (oral and inhaled), which is one of the core management in decreasing and reducing the symptoms immediately. They had less knowledge in spite of repeated visits to the hospital and for consultation.

As most of the subjects included in this study were from rural region there is a possibility that participants responded to questions with perceived ideal answers, thereby giving what they considered the best or more appropriate answer to each question. Future research for large population and at various geographical locations is warranted.

Conclusion

The findings of the study suggest there is a need to educate the subjects of COPD and the public about the disease and how to manage it. Patient's education needs to be incorporated into the standard healthcare practice, policies and standard operating procedures through which the patients understand the benefits of drug action, know how to manage breathlessness, and understand about improvement in symptoms by practicing the same. This in turn will improve their self-management skills and therefore the quality of life.

Acknowledgement

I acknowledge my thanks to Department of Pulmonology, JSS Medical college, Mysuru and Principal JSS College of Physiotherapy, Mysuru.

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