Research Paper Medical Science

Quality of Life Among Chronic Obstructive Pulmonary Disease Patients – A Hospital Based Study

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ABSTRACT

CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) is a major cause of morbidity and mortality and represents a substantial economic and social burden throughout the world. Further increase in its prevalence are expected in the coming years. COPD impairs quality of life, by having a negative impact on physical, mental and financial status of patients.
METHODOLOGY: This study aims to assess the physical, mental and financial Quality of Life of COPD patients. A cross sectional study was conducted among 100 adult COPD patients attending Thoracic Medicine in Tirunelveli Medical College Hospital between August 2015 to September 2015, using a semi structured questionnaire RESULT: 88% of COPD patients are males and 12% females. The existing risk factors are smoking, inadequate ventilation, using wood/kerosene as fuel, working in dusty environment . Daily activities are affected in 93% of the patient, 60% had negative feelings and all had financial setback. The study reveals that the disease has severe impact on the quality of life and COPD patients still live in an at- risk environment

KEYWORDS COPD, Quality of life, Risk factors.

INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is a lung ailment that is characterized by a persistent blockage of airflow from the lungs. It is an under-diagnosed, life-threatening lung disease that interferes with normal breathing and is not fully reversible. Chronic Obstructive Pulmonary Disease (COPD) is a major cause of chronic morbidity and mortality throughout the world. Many people suffer from this disease for years and die prematurely from it or its complications. In 2002 COPD was the fifth leading cause of death. [1]. WHO has projected that COPD will become the third leading cause of death worldwide by 2030[2].

Chronic obstructive pulmonary disease (COPD) is a preventable and treatable disease characterized by persistent airflow limitation that is usually progressive and associated with an enhanced chronic inflammatory response in the airways and the lung to noxious particles or gases. COPD is not curable, but treatment can slow the progress of the disease. Exacerbations and co morbidities contribute to the overall severity of illness. [2] Spirometry remains the standard method for grading COPD severity in International treatment guidelines.[1]

India contributes very significantly to mortality from COPD 102.3/100,000 and 6,740,000 DALYs out of world, thus significantly affecting health related quality of life in the country. COPD is surpassing Malaria, tuberculosis even today and the gap is getting wider with time.[4] Multiple studies from 1994 to 2010 show increasing trends of COPD morbidity and Mortality.

Worldwide, cigarette smoking is the most commonly encountered risk factor for COPD[5]. The risk factors associated with COPD in nonsmokers are numerous and incompletely understood, but a history of asthma or tuberculosis, exposure to traffic and outdoor pollution, and exposure to biomass smoke show the strongest associations[1, 6,] In the developing world, exposure to smoke from biomass fuels is an important cause of COPD, particularly in women who use biomass fuels for cooking.[6] The knowledge about the risk factors of COPD is also less among public and the patients too .

Quality of life (QOL) is an important domain for measuring the impact of this chronic illness. In practice, patients with COPD generally seek medical attention because of symptoms particularly breathlessness, and the resulting physical limitations, which affect the health-related quality of life (HR-QOL).[7,,8,9] Patients with COPD tend to have a significant burden of coexistent depression and anxiety. COPD is a costly disease with both direct costs (value of health care resources devoted to diagnosis and medical management) and indirect costs (monetary consequences of disability, missed work, premature mortality, and caregiver or family costs resulting from the illness)[1,9]

Patients' subjective perception of his/her illness can provide greater insight into the actual condition of the patient. With this knowledge, treatments and medication can be tailor made to suit the patient's needs, which in turn will optimize patient management and thus the effectiveness of therapeutic interventions [10] . Hence this study aims to find the quality of life among COPD patients in this locality .

MATERIAL AND METHOD

Study design: Hospital based Cross sectional study
Study population: 100 COPD patients whose disease status is confirmed by spirometry, attending Thoracic Medicine Department in TVMCH
Inclusion criteria: COPD patients (chronic bronchitis and emphysema) who gave consent for the study.
Exclusion criteria: Chronic asthmatics and other respiratory diseases and COPD patients who did not give consent.
Study period: August and September of 2015.
Ethical clearance : The study is conducted after getting approval from institutional ethical committee.
Study Tool: A semi structured questionnaire is designed with the help of Demographic and Health Surveys (DHS) toolkit to adapt to the local community. The questionnaire collects
(a)General information
(b) existing risk factors-smoking habit, type of fuel used at home, ventilation at home, nature of working environment.

(c) severity of the disease

Severity of the disease was calculated **using spirometry in the standard procedure**. The severity of the disease is assessed as.

Mild - FEV_1>/= 80% Predicted,
Moderate - FEV_1 50-79% Predicted
Severe - FEV_1 30-49% predicted,
Very Severe - FEV_1<30% predicted or FEV_1<50% predicted if respiratory failure present.

(d) physical quality of life- disturbance of sleep, tiredness, affected daily activities, job/travel/food restrictions, sickness absenteeism

(e) mental status - negative feelings, suicidal tendency, nuisance to family, friends or neighbours, feeling embarrassed in public

(f)financial quality of patient-financial status.

The data are collected and analysis is made using SPSS software.

RESULT:

1. SOCIODEMOGRAPHIC CHARACTERS

Out of 100 COPD adult patients, 88% are males and 12% are females. Majority are in the geriatric age group (64.8% males and 83.3% females). (Table1).About 32%of COPD patients are from urban area and 68% from rural area.

Among 100 patients, 64% are smokers; among them 84.4% are chronic smokers. Only 36% are nonsmokers which includes females.(Table 2).Among the COPD patients only 53% have got adequate ventilation in their houses. About 63% of the patients use wood/kerosene as fuel. Among the working group (91%), 61% are still working in dusty environment

Based on the spirometric finding, 56% have severe COPD, 19% moderate COPD and 25% suffer from mild COPD. Among the various symptoms 90% had breathlessness, 88% had cough with expectoration and 84% had cough. (Fig1).

2. QUALITY OF LIFE

PHYSICAL QUALITY

Daily activities are affected by the disease in 93% of the patient and about 87% are tired due to cough and breathlessness. 79% had job restrictions, about 56% had disturbed sleep,35% had travel restrictions and 24% had food restrictions.(Table 3).

MENTAL STATUS OF PATIENTS

Among 100 patients, 60% had negative feelings, 59% get panic when they cannot get their breath, 50% get embarrassed in public due to their cough or breathlessness,15% feel that they are nuisance to their family and 19% had suicidal tendency.(Table 4)

FINANCIAL QUALITY OF LIFE

Among 100 patients, all the patients had financial setback due to their illness. 34% spent money for their medication in private set up. They spent most of their money for transportation to the hospital, advanced radio diagnostic tests and for buying inhalers.. Among the working group 56% had sickness absenteeism because of the illness which in turn .affects the income of the family.

DISCUSSION

This study shows that the disease COPD affects the physical, mental and financial quality of life. COPD is more common among males .The prevalence of COPD increases with age and this is consistent with this study where majority is in the geriatric age group (64.8% males and 83.3% females). [12]

This study shows that 47% does not have adequate ventilation in their homes and 63% patients use wood/kerosene as fuel. In This study working in dusty environment is found as a risk factor for the severity of COPD. But it has no association with sickness absenteeism.

In this study about 87% are tired due to cough and breathlessness. This is consistent with the study conducted by Todt where 3.6% patients experienced fatigue, with similar proportions in men and women.[11]

About 74% of patients have negative feelings. But it does not have a direct association with disease severity.

CONCLUSION

It is vital for patients with COPD to understand the nature of their disease, risk factors for progression, and their role and the role of health care workers in achieving optimal management and health outcomes. Education should be tailored to the needs and environment of the individual patient, interactive, directed at improving quality of life, simple to follow, practical, and appropriate to the intellectual and social skills of the patient and the caregivers

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TABLES

Table1.AGE AND SEXWISE CLASSIFICATION OF COPD PATIENTS

Age in years	Male	Female
18-30	--	--
31-35	1	--
36-40	2	--
41-45	5	--
46-50	7	--
51-55	7	2
56-60	9	--
>61	57	10
TOTAL	88	12

Table2. SMOKING HABIT AMONG COPD PATIENTS

S.NO	Habit of Smoking	Number of COPD patients
1	No smoking	36
2	<1 year	2
3	1-5 years	8
4	>5 years	54
	TOTAL	100

Fig1: DISTRIBUTION BASED ON SEVERITY OF DISEASE

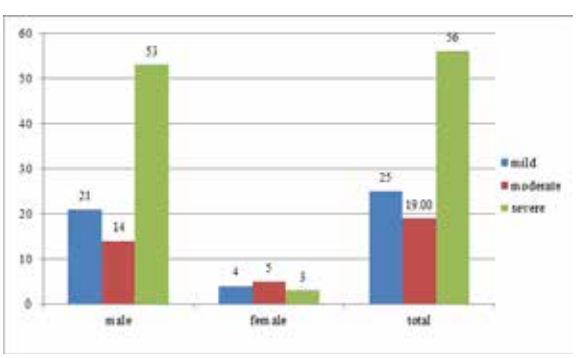

Table3: ROLE OF COPD ON PHYSICAL QUALITY OF LIFE

S NO	Physical quality of life	AFFECTED in %	
		Male	Female
1	Disturbs your sleep	47	9
2	Makes you tired	80	7
3	Affects daily activities	82	11
4	Job restrictions	71	8
5	Travel restrictions	26	9
6	Food restrictions	17	7
7	Sickness absenteeism	80	9

Table4. MENTAL STATUS OF PATIENTS WITH COPD

S No	MENTAL QUALITY	Affected in%	
		Males	Females
1	Having negative feelings	50	10
2	Cough or breathing makes embarrassment	42	8
3	Chest trouble is a nuisance to others	13	2
4	Get panic when cannot get breath	52	7
5	Had a suicidal tendency	15	4

Table5. SICKNESS ABSENTEEISM AND WORKING ENVIRONMENT

S No	WORKING ENVIRONMENT	SICKNESS ABSENTEEISM	
		Yes	No
1	Dusty	36	25
2	Non dusty	15	15

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