Research Paper Medical Science

Smoking Awareness in Copd Patients

Krishnamoorthy K	Professor, Department of Thoracic Medicine, Tirunelveli, Medical College Hospital
Sangamithra G	Associate Professor, Department of Thoracic Medicine, Tirunelveli, Medical College Hospital
*** Heber Anandan**	Senior Clinical Scientist, Dr.Agarwal's Healthcare Limited * Corresponding Author
Senthil Arasu P	Senior Resident, Department of Thoracic Medicine, Tirunelveli, Medical College Hospital

ABSTRACT

Aim of the study is to analyze the level of awareness in COPD patients and analyzing the need for awareness in target groups. Methodology: 44 COPD patients diagnosed as per GOLD criteria were selected for the study and a cross sec-tional study was done and data obtained using a questionnaire method was evaluated using proper statistical analysis. Results: Majority of the patients belongs to age group between 65 and 74 years and majority belongs to very low eco-nomic status. Only 50% of patients were having awareness regarding COPD and smoking correlation. 47.7 % patients were heavy smokers. 95.5% patients who got awareness about the disease quit smoking. Government hospital patients were more aware than private hospital patients regarding COPD. Conclusion: COPD awareness can really make an impact on the epidemiology and prognoses in COPD patient's .Government programmes are really useful in creating awareness among patients to quit smoking. Lower socio economic patients should be a prime targets in awareness pro-grammes.

KEYWORDS COPD, Smoking, awareness, Lung diseases

Introduction

COPD is the fourth leading cause of the death worldwide, and it will become 3rd leading cause of the disease by 2020[1]. As per the estimation done by the WHO around 2.74 million deaths occurs due to COPD, which is 5% of the total death worldwide [2]. Out of this death rate around 90% of the death occurs due to smoking. This shows that smokers are at the high risk of developing COPD in their life span. The main reason for this much higher mortality is lack of awareness of the disease worldwide. Many patients are aware that smoking can cause lung cancer but the awareness about smoking causing COPD is comparatively less. Many patients realize the severity of the disease when they loose 50% of their lung function[3].Smoking is the most important risk factor for developing COPD, and about 50% of smokers develop the disease[4]. When diagnosed with COPD, many stop smoking, while some continue to smoke. It is important for smokers with COPD to succeed in smoking cessation before their respiratory health is irreversibly damaged [5]. It has been shown that smoking cessation, even intermittent cessation, reduced the excess lung function decline due to tobacco smoke[6-8], and decreased the risk of exacerbations[9]. So, it is very essential to observe the awareness of the COPD disease in the general population and make them aware about the impact of smoking in the disease. Economic burden of smoking and social responsibility of smoking cessation should be addressed to the patients. Along with that it is also very essential to know the factors which influence people to smoke or the factors which stops people to quit smoking. So, in future one can reduce consumption of smoking by taking preventive steps against the factors.

Materials and methods

Cross sectional study conducted in patients visiting outpatient department of Department of Thoracic Medicine in Government tertiary care hospital. Institutional Ethics committee approval was obtained. Eligible subjects were COPD patients diagnosed as per GOLD criteria aged 45 years and older who smoked at least 10 packs per year. Exclusion criteria included age less than 45 years, those smoked less than 10 pack years, patients with other chronic lung diseases like bronchial asthma, Inflammatory Lung Disease. 44 patients were randomly selected for the study, informed consent obtained. In order to assess the level of awareness in COPD patients a questionnaire of 18 relevant items were formulated. The questionnaire was designed according to the need and understanding of the general population, so the data which were generated from the questionnaire would be very effective and knowledge giving. The questionnaire contained both personal and general information and was pre-validated. All the questions have their own significant value and had been divided as per their importance. Based on the questionnaire method patient is categorized as aware and unaware group. Data collected are analyzed using Fisher's exact test and Kendall's tau test.

Results:

The sample consisted of 44 patients. Age group ranging between 45 and 80 yrs were selected for the study. Maximum no: of patients were in the age group between 65 and 74 yrs. Mean age of the study group is 64.2 yrs. Patients who are still smoking were 18.2% even with the disease burden and 81.8%% quit smoking because of the disease. 45.5% smoked for 20yrs. 50% of patients were not aware that smoking can cause the disease. Majority of the patients belong to very low economic status, 75% patients monthly income in the range between 2000 and 5000 Rupees. Smoking index is used to access the severity of smoking, index score up to 200 is taken as light smoking ,201 to 350 is taken as moderate smoking and more than 350 is taken as heavy smoking . Data shows 47.7% belongs to heavy smoker group. Number of patients smoking Beedi (81 .8%) was more than cigarette smokers (18.2%).

Table 1 COPD awareness in patients taking treatment in Government and Private Hospitals

	COPD awareness	
	No	Yes
Government Hospitals	15	21
Private Hospitals	7	1

Patients who have taken treatment from government hospitals are more aware than those who took treatment from both government and private hospitals (p value = 0.046). (Table 1) Out of 22 patients who are aware of smoking and its relation with COPD 21 quit smoking which shows that creating awareness has got an impact on the disease progression and prevention p value =0.046. (Table 2)

Table 2 Patients quit smoking after COPD awareness

COPD	Quit smoking	
	No	Yes
COPD Awareness	7	15
No Awareness	1	21

Discussion:

The present study was conducted in Thoracic medicine department in Tirunelveli medical college Tamil Nadu. The present study contained people in the age groups above 45years and among them disease was more common in the age groups between 65 &74 yrs (36.4%) and is similar with the study showing prevalence of COPD in individuals 65 years of age and older was recently estimated to be 14.2% (11 to 18%) compared with 9.9% (8.2 to 11.8%) in those 40 years or older [10]. Using Global Obstructive Lung Disease (GOLD) classification to determine the severity of COPD in the United States, the prevalence of GOLD stage II or higher was 1.9% in individuals 40 to 49 years of age compared with 19.2% in those older than 70 years. A twofold increase in the prevalence of COPD was observed for every 10-year increment in age[11]. This study shows that simple, knowledge based questions can aid the identification of COPD awareness in the general smokers population. In our study awareness regarding COPD and smoking as its cause is 50% and is almost very similar to the awareness of 40% reported in a survey study by the pulmonary institute, Zerifin, Israel[12]. Several studies also found that smoking has negative effects on the development and progression of the COPD. According to the study done by the Lundbuk & Lindberg et al it was suggested that smoking is the primary cause of the COPD, and almost 50% of the smokers develop COPD in their life span[13]. The study done by the SLAMA also suggests that smoking is the primary cause of the death by COPD[14]. These all studies indicated that smokers should be aware about it. In the present study 50% of the patients was aware that the smoking is the one of the primary cause of the disease COPD. But in the similar study, done by the Zielinski & M. Bednarek et al[15], it was suggested that in developing countries like India and China, where the smokers population contains of more males smokers than the female smokers, the male smokers have more chances to develop COPD through smoking, and people should be aware of this fact in different countries of Asia. This is not supporting our findings. Because as per the findings of our study half of the male smokers were unaware of the reality in Asia. Barbara & Peter[16]suggested that COPD remains under recognized and under-treated. In this study they felt that the barriers to recognition and diagnosis of COPD are failure of participants to report COPD symptoms, lack of awareness of COPD and inadequate training in COPD diagnosis and management and around 50% of this study participants were also not aware[16] .David and Meir[17], also suggested that lack of awareness of COPD is the primary reason for the low level of diagnosis. Chronic diseases have a variable impact on men and women due to the complex interaction between biological sex and environmental risk factors to which men and women are differentially exposed. Sex differences have not been adequately explored in chronic obstructive pulmonary disease (COPD), as most studies have either had small sample sizes or not enough women to allow for accurate comparisons. For example, the number of women in key COPD clinical trials has ranged from 0 to 35%. Recent work has suggested that while the overall prevalence and incidence of COPD are higher in men (18-20), the incidence of COPD in younger age groups (i.e., age 55–59) is now much higher in women [20]. Women may be more susceptible to developing COPD, are more likely to express the airway-predominant subtype, and report more severe symptoms and activity intolerance. Our study also contains only male population(100%) which is similar to the above mentioned studies but as per many western studies women are more susceptible to COPD than men but that trend is very less in many Indian studies because of the decreased smoking among Indian women because of the popular cultural and social factors. In our study majority of the patients belong to very low economic status and is similar the study conducted in various non communicable diseases like COPD by Viegi etal[21]. Beedi smoking is associated with emphysema [22] and a nearly fourfold increased risk for chronic bronchitis[23]and in our study also 81% of COPD patients were using beedis .

Conclusion:

The data from this survey suggests that very low level of awareness is seen in the smoker population and almost half of the participants were not even 50% aware of the COPD. Therefore it is hoped that, the healthcare communities and awareness programs should be increased in the cities like Tirunelveli. Contribution from Government hospitals plays an important role in implementing and propagating COPD awareness programs.

References:

1. Anthonisen, N. (1994). Effects of Smoking Intervention and the Use of an Inhaled Anticholinergic Bronchodilator on the Rate of Decline of FEV1. JAMA, 272(19), 1497.
2. Au, D., Bryson, C., Chien, J., Sun, H., Udris, E., Evans, L., & Bradley, K. (2009). The Effects of Smoking Cessation on the Risk of Chronic Obstructive Pulmonary Disease Exacerbations. J GEN INTERN MED, 24(4), 457-463.
3. Barbara P Yawn, P. (2008). Knowledge and attitudes of family physicians coming to COPD continuing medical education. International Journal Of Chronic Obstructive Pulmonary Disease, 3(2), 311. Retrieved from
4. Bellamy, D., & Booker, R. Chronic obstructive pulmonary disease in primary care.
5. Buist, A., McBurnie, M., Vollmer, W., Gillespie, S., Burney, P., & Mannino, D. et al. (2007). International variation in the prevalence of COPD (The BOLD Study): a population-based prevalence study. The Lancet, 370(9589), 741-750.
6. Buist, A., McBurnie, M., Vollmer, W., Gillespie, S., Burney, P., & Mannino, D. et al. (2007). International variation in the prevalence of COPD (The BOLD Study): a population-based prevalence study. The Lancet, 370(9589), 741-750.
7. Enslein, K., Fletcher, C., Peto, R., Tinker, C., & Speizer, F. (1978). The Natural History of Chronic Bronchitis and Emphysema: An Eight Year Study of Early Chronic Obstructive Lung Disease in Working Men in London. Technometrics, 20(2), 212.
8. Godtfredsen, N., & Prescott, E. (2011). Benefits of smoking cessation with focus on cardiovascular and respiratory comorbidities. The Clinical Respiratory Journal, 5(4), 187-194.
9. Halbert, R., Natoli, J., Gano, A., Badamgarav, E., Buist, A., & Mannino, D. (2006). Global burden of COPD: systematic review and meta-analysis. European Respiratory Journal, 28(3), 523-532.
10. K, S. (2008). Global perspective on tobacco control. Part I. The global state of the tobacco epidemic. - PubMed - NCBI. Ncbi.nlm.nih.gov. Retrieved 19 February 2016
11. Lindberg, A., & LundbÃ¤ck, B. (2008). The Obstructive Lung Disease in Northern Sweden Chronic Obstructive Pulmonary Disease Study: design, the first year participation and mortality. The Clinical Respiratory Journal, 2, 64-71.
12. Lundback, b., Lindberg, a (2003). Not 15 But 50% of smokers develop COPD?-Report from the Obstructive Lung Disease in Northern Sweden Studies. Respiratory Medicine, 97(2), 115-122.

13. Lunn, W. (2006). Endoscopic Lung Volume Reduction Surgery. Chest, 129(3), 504-506.
14. M, S. (2007). Prevalence of chronic obstructive pulmonary disease among smokers aged 45 and up in Israel. - PubMed - NCBI. Ncbi.nlm.nih.gov. Retrieved 19 February 2016, from
15. Menezes, A., Perez-Padilla, R., Jardim, J., MuiÃ±o, A., Lopez, M., & Valdivia, G. et al. (2005). Chronic obstructive pulmonary disease in five Latin American cities (the PLATINO study): a prevalence study. The Lancet, 366(9500), 1875-1881.
16. Pelkonen, M. (2001). Smoking cessation, decline in pulmonary function and total mortality: a 30 year follow up study among the Finnish cohorts of the Seven Countries Study. Thorax, 56(9), 703-707.
17. Technologies, S. (2007). IMAJ | The Israel Medical Association Journal. IMAJ | The Israel Medical Association Journal. Retrieved 19 February 2016, from
18. van Durme, Y., Verhamme, K., Stijnen, T., van Rooij, F., Van Pottelberge, G., & Hofman, A. et al. (2009). Prevalence, Incidence, and Lifetime Risk for the Development of COPD in the Elderly. Chest, 135(2), 368-377.
19. Viegi G, e. (2001). Epidemiology of chronic obstructive pulmonary disease (COPD). - PubMed - NCBI. Ncbi.nlm.nih.gov. Retrieved 19 February 2016, from
20. Viegi, G., Scognamiglio, A., Baldacci, S., Pistelli, F., & Carrozzi, L. (2001). Epidemiology of Chronic Obstructive Pulmonary Disease (COPD). Respiration, 68(1), 4-19.
21. Zielinski, J. (2006). Increasing COPD awareness. European Respiratory Journal, 27(4), 833-852.
22. Gupta PC, Asma S. Bidi Smoking and Public Health. New Delhi: Ministry of Health and Family Services, Government of India, 2008.
23. Rahman, M., & Fukui, T. (2000). Bidi smoking and health. Public Health, 114(2), 123-127.