

## Study of Clinical Profile of COPD in Smokers and Non-Smokers

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**Abstract:** COPD is characterized by the presence of airflow limitation resulting from airways inflammation and remodeling often associated with parenchymal destruction and the development of emphysema. In this observational study of 84 patients, non-smokers (21%) with COPD had less impairment in airflow limitation, chronic cough, and sputum compared with their smoking counterparts (50%).

**Key Word:** COPD, SMOKERS, EMPHYSEMA, SPIROMETRY.

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### I. Introduction

Chronic obstructive pulmonary disease (COPD) is primarily characterized by the presence of airflow limitation resulting from airways inflammation and remodeling often associated with parenchymal destruction and the development of emphysema. Smoking is a major risk factor for COPD. Other risk factors also contribute in development of COPD. The similarities and differences in clinical presentation between smokers and non-smokers are not fully described. This study is designed to address this issue.

### II. Material And Methods

This is a hospital based single-center observational study conducted in department of pulmonary medicine at Regional Institute of Medical Sciences, Imphal. Eighty four patients with diagnosis of COPD were selected based on GOLD guidelines. Included subjects were divided into non-smokers and smokers by a cutoff of 100 cigarettes or beedi.

**Table No: 1** Baseline characters of patients in study

Total number of COPD Patients -84	
Smokers- 52(61.9%)	Non smoker -32 (38.09%)
Male -54	Female-30
Mild to moderate obstruction	-43
Severe to very severe obstruction	-41

**Table No: 2** Showing the average age and standard deviation among smokers and non-smokers.

Average age	Smoker	Non smoker
61.47± 11.15	58.21 ± 9.39	66.78± 11.72

### III. Result and Discussion

Out of 84 subjects, 52 patients (61.90%) were smokers and non-smokers were 32(38.09%). Average age among smokers was 58.21 years while among non-smokers was 66.78 years. Compared with smokers, non-smokers were more likely to be female, reported less chronic cough and sputum, higher measures of pulmonary function tests predicted. Smoking was correlated negatively with pulmonary function test and correlated positively with GOLD grade and symptoms.

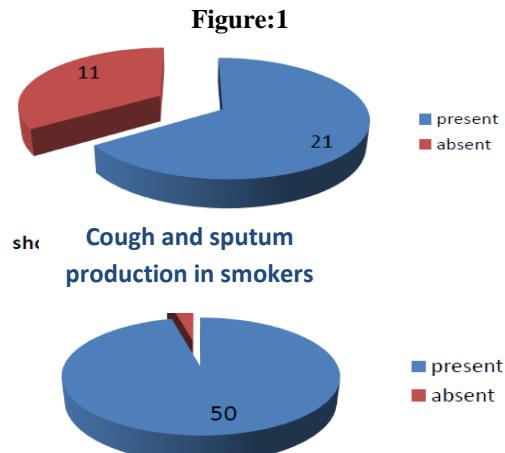


Figure showing the presentation of cough and sputum production in smokers and non-smokers in COPD

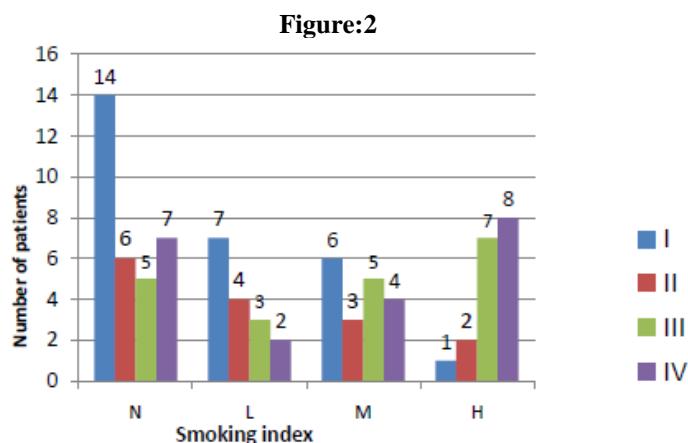


Figure showing correlation between smoking index and stage of COPD  
(N-Never smokers, L-Light smokers, M-Moderate smokers, H-Heavy smokers)

#### IV. Conclusion

Non-smokers with COPD had less impairment in airflow limitation, chronic cough, and sputum compared with their smoking counterparts. Tobacco cessation is warranted in smokers with COPD.

#### References

- [1]. Barnes PJ, Celli BR. Systemic manifestations and comorbidities of COPD. EurRespir J. 2009;33(5):1165-85.
- [2]. Global Initiative for Chronic Obstructive Lung Disease Global Strategy for the Diagnosis, Management and Prevention of COPD, Global Initiative for Chronic Obstructive Lung Disease 2017.
- [3]. Balkissoon R, Lommatsch S, Carolan B, Make B. Chronic obstructive pulmonary disease:a concise review. MedClinNorthAm.2011;95:1125-1141
- [4]. Eisner MD, Anthonisen N and Coultas D. An official American Thoracic Society public policy statement:novel risk factors and the global burden of chronic obstructive pulmonary disease. AmJRespirCritCareMed.2010;182:693-718.
- [5]. Lamprecht B, McBurnie MA and Vollmer WM. COPD in never smokers:results from the population-based burden of obstructive lung disease study. Chest.2011;139:752

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