

A Study on Prevalence of Chronic Obstructive Pulmonary Disease in a Known Population at a Tertiary Care Teaching Hospital

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ABSTRACT

Background: Chronic obstructive pulmonary disease (COPD) is a common preventable and treatable chronic respiratory disease, which affects people globally. The present study was conducted to assess the prevalence of chronic obstructive pulmonary disease in a known population.

Materials and Methods: The present study was conducted among participants aged 30 to 60 years over the period of one year. Before commencement of study permission was taken from Ethical committee. Informed consent was obtained from all participants. Complete history and documentation was collected. Demographic data were collected during the interview including self-reported age, sex, smoking status. The data was assessed using SPSS for windows release 21.0 (SPSS, Chicago, IL, USA).

Results: In the present study total sample size of 450 was collected and assessment of COPD was done. In this study males were 255 and 73 males were COPD patients. Total females were 195 and 42 were COPD patients. Maximum COPD patients were present in the age group of 41-50 years (41.46%). Smoking habit was present in 59.13%.

Conclusion: Our study concluded that the males were 255 and 73 males were COPD patients. Total females were 195 and 42 were COPD patients. Maximum COPD patients were present in the age group of 41-50 years (41.46%). Smoking habit was present in 59.13%.

Keywords: COPD, Smoking, Chronic Respiratory Disease.

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INTRODUCTION

Chronic obstructive pulmonary disease (COPD), characterized by progressive airflow limitation that is not fully reversible, is a major cause of chronic morbidity and mortality. It also carries a substantial financial burden on society.¹⁻⁴ Chronic obstructive pulmonary disease (COPD) is one of the major preventable chronic respiratory diseases. The Global Initiative for Obstructive Lung Disease (GOLD) describes COPD as a common preventable and treatable disease, characterised 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.⁵

COPD is reported to have an estimated disease burden of 210 million people worldwide.⁶ Globally COPD was the fourth leading cause of death (5.1%) in 2004 and is projected to occupy the third position (8.6%) in 2030.⁷

Cigarette smoking is the major risk factor for COPD, and others include occupational exposures, air pollution, airway hyper-

responsiveness and asthma, while genetic predisposition may also play some role.⁸⁻¹¹

The present study was conducted to assess the prevalence of chronic obstructive pulmonary disease in a known population.

MATERIALS AND METHODS

The present study was conducted at Department of TB & Chest, Terna Medical College, Nerul, Navi Mumbai, Maharashtra (India) among participants aged 30 to 60 years over the period of one year. Before commencement of study permission was taken from Ethical committee. Informed consent was obtained from all participants. Complete history and documentation was collected. Demographic data were collected during the interview including self-reported age, sex, smoking status. Participants with unknown and missing information for COPD were excluded from the analysis. The data was assessed using SPSS for windows release 21.0 (SPSS, Chicago, IL, USA).

Table 1: Prevalence of COPD according to gender

Gender(n)	COPD present	p-value
Male (255)	73 (28.62%)	<0.05
Female (195)	42(21.53%)	
Total (450)	115(25.55%)	

Table 2: Prevalence of COPD according to age group

Age group (n)	COPD present
30-40 years(137)	28(20.43%)
41-50 years(123)	51(41.46%)
51-60 years (190)	36(18.94%)

Table 3: Smoking status

Smoking status	COPD present
Present	68(59.13%)
Absent	47(40.86%)

RESULTS

In the present study total sample size of 450 was collected and assessment of COPD was done. In this study males were 255 and 73 males were COPD patients. Total females were 195 and 42 were COPD patients. Maximum COPD patients were present in the age group of 41-50 years (41.46%). Smoking habit was present in 59.13%.

DISCUSSION

Spirometry is the internationally accepted gold standard for the diagnosis of COPD.⁵ A recent study on COPD prevalence from three cities in India using standardised methodology did not have an adequate sample size to reflect the true burden of the disease.¹²

In the present study total sample size of 450 was collected and assessment of COPD was done. In this study males were 255 and 73 males were COPD patients. Total females were 195 and 42 were COPD patients. Maximum COPD patients were present in the age group of 41-50 years (41.46%). Smoking habit was present in 59.13%.

The highest prevalence of COPD in Europe could be explained by the fact that, according to WHO 2015 data, the age-standardised prevalence of tobacco smoking was the highest in Europe (27%).¹³

COPD (or chronic bronchitis or emphysema), among all US adults in 2011, increased with age from 6.6% for adults aged 45 to 54 years to 9.2% for adults aged 55 to 64 years, to 12.1% for adults aged 65 to 74 years.¹⁴

Females had a higher prevalence than males, which is consistent with findings reported by Ford et al.¹⁵

CONCLUSION

Our study concluded that the males were 255 and 73 males were COPD patients. Total females were 195 and 42 were COPD patients. Maximum COPD patients were present in the age group of 41-50 years (41.46%). Smoking habit was present in 59.13%.

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