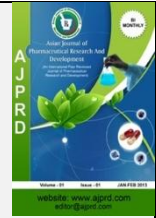


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Research Article

## The Comorbidities And Clinical Profile Of Chronic Obstructive Lung Disease Patients Attending Tertiary Care Hospital

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### ABSTRACT

**Background:** Chronic pulmonary obstructive disease (COPD) has been responsible for the decreased quality of life as well as increased morbidity and mortality. The objective of the present study was to observe the comorbidities and clinical profile of patients with chronic pulmonary obstructive disease at a tertiary care center.

**Methods:** The data were collected from 80 COPD patients presenting to OPD of the pulmonary medicine department from August 2021 to January 2022. The data were extracted from a medical case sheet and for statistical analysis, MS Excel was used.

**Results:** As the age increased the prevalence of COPD increased and the highest was found to be in the age group above 60 years of age. Males were more affected by COPD as compared with females. The smokers were more compared to the nonsmokers. The prevalence of smoking among COPD was noted to be 60% compared to 40% as non-smokers. The most common clinical feature was breathlessness 100% followed by cough 95%. 15% of the cases of copd had Hypertension as the comorbidity.

**Conclusion:** Breathlessness was the most common symptom at presentation and hypertension were the most common comorbidities found.

**Keywords:** Clinical profile, Co-morbidities, Hypertension, Patients, Symptoms

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### INTRODUCTION

The Global Initiative for Obstructive lung disease defines Chronic Obstructive Pulmonary Disease (COPD) as “COPD is a preventable and treatable disease with some significant extrapulmonary effects that may contribute to the severity in individual patients. Its pulmonary component is characterized by chronic airflow limitation that is not fully reversible. The airflow limitation is usually progressive and associated with the abnormal inflammatory response of the lungs to noxious particles and gases.”<sup>1</sup>COPD is a group of progressive lung diseases. The

most common are emphysema and chronic bronchitis.<sup>2</sup>Many people with COPD have both of these conditions. Emphysema slowly destroys air sacs in the lungs, which interferes with outward airflow while, Bronchitis causes inflammation and narrowing of the bronchial tubes, which allows mucus to build up. Both the conditions obstruct airflow in the respiratory system and develop respiratory problems.<sup>3</sup>Chronic pulmonary obstructive disease (COPD) has been responsible for the decreased quality of life as well as increased morbidity and mortality. Globally it has been estimated that nearly three million die yearly due to

COPD and are more likely to occupy the third place of mortality by 2030. It has been further estimated that in India about 30 million suffer from COPD. The prevalence of COPD has been reported as around 3.5% in India. The males are found to be affected more than females<sup>4</sup>. A diagnosis of COPD should be considered if any patient has dyspnoea, chronic cough, or sputum production, and/or a history of exposure to risk factors for the disease, especially cigarette smoking.<sup>5</sup> Often, the prevalence of tobacco smoking, although in many countries, outdoor, occupational, and indoor air pollution — the burning of wood and other biomass fuels are major COPD risk factors. The prevalence and burden of COPD are projected to increase in the coming decades due to continued exposure to COPD risk factors and the aging of the world’s population<sup>6</sup>. Patients with COPD often have a concomitant chronic illness (co-morbidities) at the time of diagnosis, including cardiovascular disease, metabolic syndrome, skeletal muscle dysfunction, osteoporosis, depression/anxiety, gastroesophageal disease, bronchiectasis, obstructive sleep apnoea, lung cancer, etc<sup>7</sup>

**METHODOLOGY:**

The present study is prospective observational study among a total of 80 cases both men and women. This study was conducted in a general medicine department of Rajiv Gandhi institute of medical sciences (GGH-RIMS), Kadapa for a period of 6 months starting from August 2021 to January 2022. Patients who are included in the study were confirmed cases of COPD. Subjects who are unwilling to participate in

the study and aged below 18 years were excluded in the study. The data was collected from patient’s case sheets. The study had conducted after getting approval from the ethical committee. The study had initiated after getting consent from the patients representatives. The first analysis was made using Microsoft Excel 2007 manually and the collected data from the respondents were analyzed using Graph Pad Prism. The data from the data collection sheet were analyzed for different parameters. For the analysis of the data descriptive statistics such as frequencies, percentages, mean were used.

**RESULTS:**

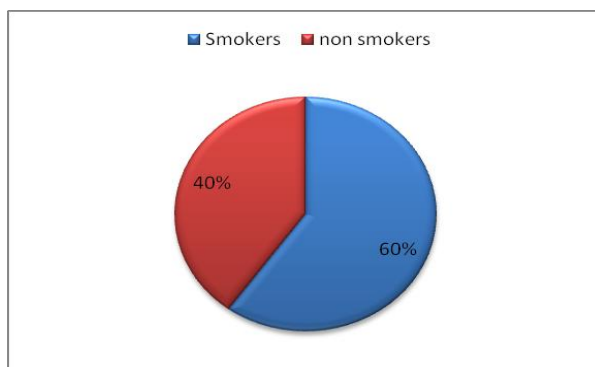
Chronic obstructive pulmonary disease, usually referred to as COPD (Chronic obstructive pulmonary disease), is a group of progressive lung diseases. The most common are emphysema and chronic bronchitis. Emphysema slowly destroys air sacs in the lungs, which interferes with airflow while, Bronchitis causes inflammation and narrowing of the bronchial tubes, which allows mucus to build up. Both the conditions cause obstruction of airflow in the respiratory system and develop respiratory problems.

Out of 80 patients, 24(30%) were females and 56(70%) were males. The majority of patients were in the age group between 61-70 years as shown in Table.1

**Table NO.1 Age distribution of the subjects**

Age	No. of patients	Percentage
31-40	4	5
41-50	8	10
51-60	12	15
61-70	44	55
71-80	8	10
81-90	4	5

Among 80 patients 48 (60%) patients had a history of smoking. In remaining patients 32(40%) were females are exposed to biomass fuel and passive smoking and among the male patients who did not smoke, the environmental factors, for example, air pollution and passive smoking may be considered as the possible etiology for COPD in them as shown in Figure.1



**Figure 1: Distribution based on smoking status**

Among 80(100%)patients all had shortness of breath followed by 76(95%) patients who had a cough,12 (15%)patients had a fever,8(10%) patients had orthopnea and edema, and 4 (5%)patients had chest pain and palpitations as shown in Fig.3

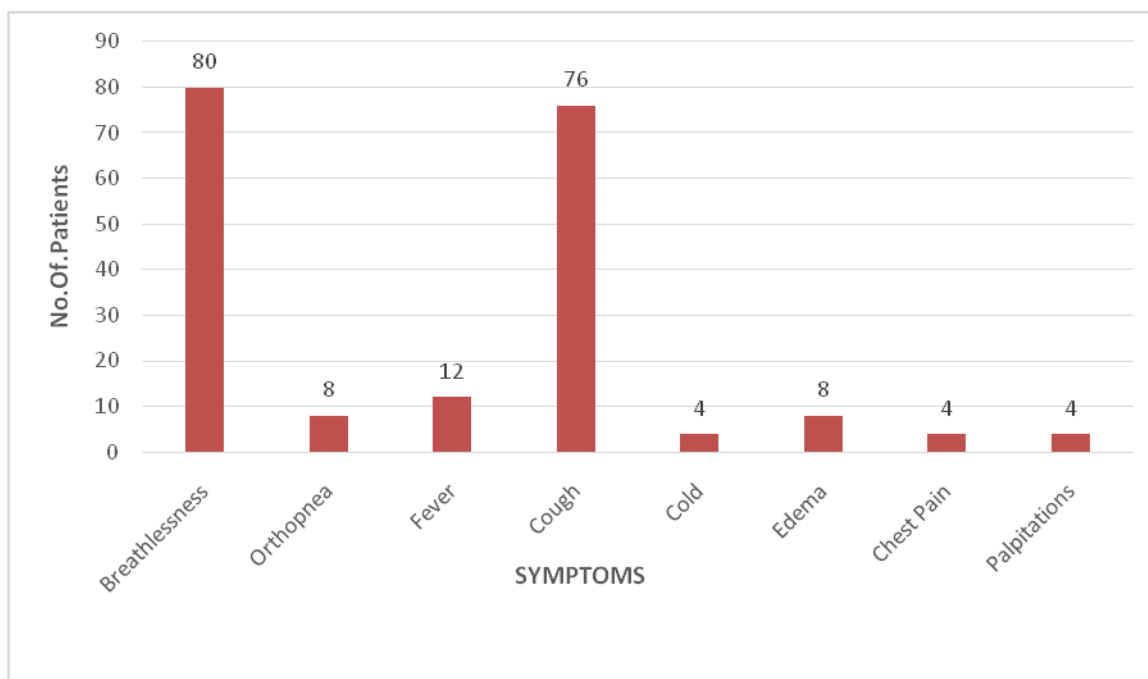


Figure 2: Distribution based on symptoms

Most of the patients are suffering from comorbidities conditions. out of 80 cases, only COPD was 34, remaining were with comorbid conditions. The most common comorbid condition 44(55%)was Hypertension followed by 20(25%) cases were tuberculosis, 8 (10%)cases were cardiac myopathy, asthma, and diabetes, and 4(5%) were hyperthyroidism and anemia as shown in fig

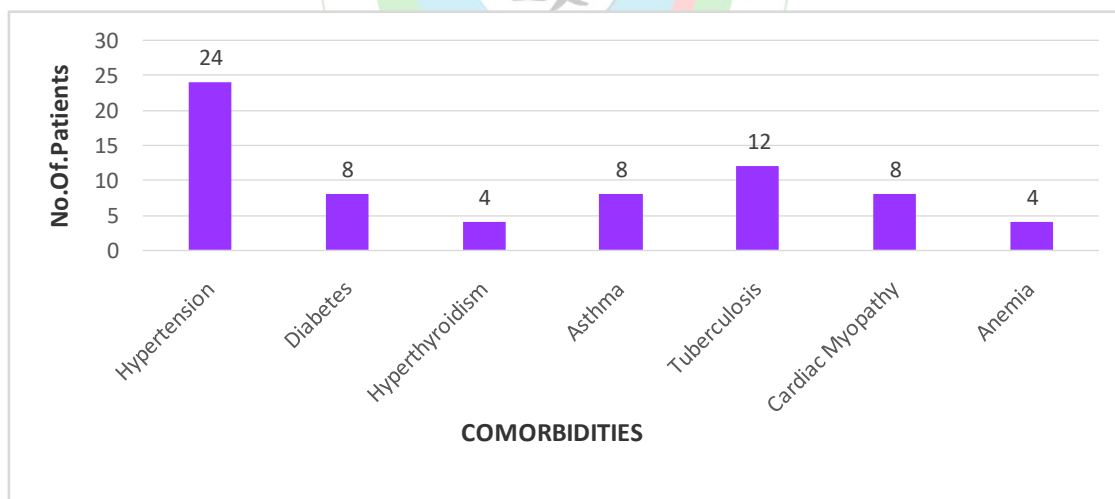


Figure 3: Distribution based on comarbidities

**DISCUSSION**

In the present study out of 80 patients analyzed, more male patients have visited the general medicine IP department than female patients. These findings are similar to many other studies. According to Ramakrishna Rachakondaet,<sup>8</sup>estimated that more male patients were affected than female patients. This study is comparable to DB. Jyothi et al<sup>9</sup> of which 278 were males and122 were females. This shows that COPD is more common in males.In our study majority of patients, 40

belong to the age groups between 61-70 years. Ashok Kumar gudagunti et al,<sup>4</sup> found in their study more patients belong to the age group greater than 65 years. these findings are contrary to the study done by R.Graham Barr et al,<sup>10</sup>analyzed that more subjects belong to 50-59 years.In the current study, most of the patients were smokers 42 and in the remaining, some were females who had a history of biomass fuel and passive smoking and in other males, the cause may be environmental pollution and smoking. these results are

comparable to Kiran Vikram Khillare et al,<sup>6</sup> In their study majority of cases 85% were smokers and 15% were non-smokers. prasuna KR et al,<sup>11</sup> in their study reported most of the patients 80% had a history of smoking. In the present study, all patients 80 had a complaint of breathlessness followed by cough seen in 76 patients. these findings are similar to Amar R.Pazareet al,<sup>12</sup> in their study breathlessness was seen in all patients. However, these findings were contrary to the study done by Kshama S.Ramesh et al,<sup>1</sup> in their study they observed most common symptom was cough 82 followed by breathlessness 79. In the present study, only COPD cases are 34 and remaining with different comorbidities. The most common comorbidity hypertension was found in 24 patients. These findings are contrary to the study done by Kiran Vikram khillare et al,<sup>6</sup> in their study they found the most common comorbidity was diabetes(50%). Sanjay Dhali et al,<sup>5</sup> concluded that hypertension 20 was the most common comorbidity in their study.

### CONCLUSION

The study concludes that the most common symptom of COPD as encountered in the IP department was breathlessness, and hypertension was the most common comorbidity. Copd is primarily caused by smoking, but other causes like exposure to indoor, outdoor smoke, environmental factors, passive smoking, etc. are also equally important and significant. The presentation of copd is similar in smokers and non smokers. Copd is linked to a lower quality of life, as well as an increase in morbidity and mortality. In the future, this study will help in the management of patients with COPD.

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