**Journal of Advanced Medical and Dental Sciences Research**

@Society of Scientific Research and Studies

Journal home page: www.jamdsr.com doi: 10.21276/jamdsr ICV 2018= 82.06

(e) ISSN Online: 2321-9599; (p) ISSN Print: 2348-6805

# Original Research

## Evaluation of cases of Chronic Obstructive Pulmonary Disease - A clinical study

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***ABSTRACT*:**

**Background:** Chronic obstructive pulmonary disease (COPD) is a chronic respiratory disease characterized by a decline in lung function. This study was conducted to assess the cases of COPD. **Materials & Methods:** The present study was conducted in the department of Chest and TB. It comprised of 124 cases of COPD. Information such as name, age, sex and history of smoking was recorded. **Results:** There were 64 males and 60 females. Smokers were 88 and non- smokers were 36. The difference was significant (P< 0.05). Most of the patients were having middle status (55%) while 35% comprised of low status and only 10% consisted of high status. The difference was significant (P<0.05). **Conclusion:** Authors found that chronic obstructive pulmonary disease is commonly seen in males and smoking was one of the contributing factors.

**Key words:** Chronic obstructive pulmonary disease, lung function, Respiratory

Received: 15 April, 2019 Revised: 25 July 2019 Accepted: 26 July 2019

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**This article may be cited as:** Kumar J. Evaluation of cases of Chronic Obstructive Pulmonary Disease - A clinical study. J Adv Med Dent Scie Res 2019;7(8): 109-111.

### INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is a chronic respiratory disease characterized by a decline in lung function over time and accompanied by respiratory symptoms, primarily dyspnea, cough, and sputum production.[1] Consequently, COPD is associated with a significant economic burden, including hospitalization, work absence, and disability.1 Current data suggest that COPD mortality is increasing, and by 2020, COPD is predicted to be the third-leading cause of death worldwide.[2] Chronic obstructive pulmonary disease (COPD) was previously known as chronic bronchitis and emphysema. Chronic bronchitis has been defined by (BMRC) as "daily productive cough for at least three consecutive months for more than two successive years. Emphysema has been defined as an "anatomic alteration of the lung characterized by an abnormal enlargement of the air spaces distal to the terminal, non-respiratory bronchiole, accompanied by destructive changes of the alveolar walls."[3]

Chronic obstructive pulmonary disease (COPD) has high mortality and morbidity and is the main reason for death. It is responsible for a huge social and economic burden for the health care infrastructure. The prevalence of COPD is approximately 9% in men and 7% in women. There have been a few reports on COPD epidemiology in India in the past. But most of those reports were based on studies on limited population groups.[4]This study was conducted to assess the cases of COPD.

### MATERIALS & METHODS

The present study was conducted in the department of Chest and TB. It comprised of 124 cases of COPD. All were informed regarding the study and written consent was obtained. Ethical clearance was obtained from institutional ethical committee. Information such as name, age, sex and history of smoking was recorded. Results thus obtained were tabulated and subjected to statistical analysis. P value less than 0.05 was considered significant.

## RESULTS

**Table I: Distribution of patients**

| | Total- 124 | |
|---|---|---|
| **Gender** | **Males** | **Females** |
| Number | 64 | 60 |

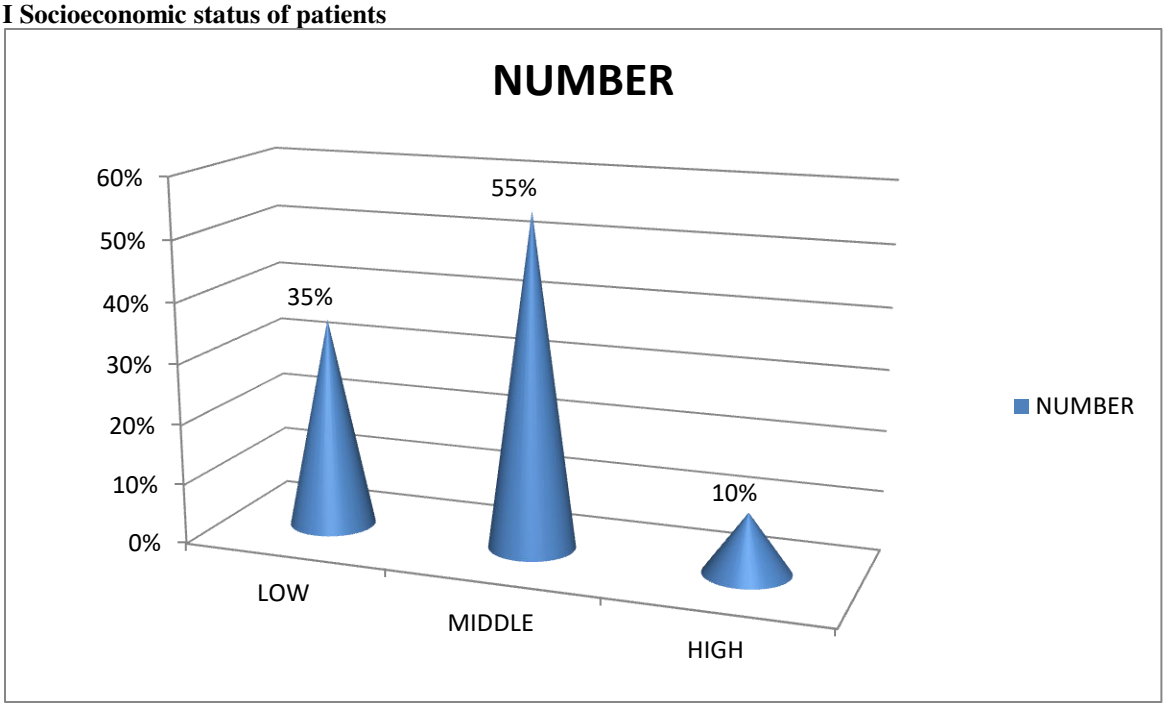
Table I shows that there were 64 males and 60 females.

**Table II: Habit history**

| Habit | Number | P value |
|---|---|---|
| Smoker | 88 | 0.05 |
| Non- smoker | 36 | |

Table II shows that, smokers were 88 and non- smokers were 36. The difference was significant (P< 0.05).

**Graph I Socioeconomic status of patients**




Graph I shows that most of the patients were having middle status (55%) while 35% comprised of low status and only 10% consisted of high status. The difference was significant (P<0.05).

## DISCUSSION

There are many unanswered questions about the epidemiology of COPD in India and there is a paucity of systematically collected prevalence data using well-standardized protocols from India. Most of the available prevalence estimates are not based on spirometry testing or adopted non-standard methods.[5]

The Global Initiative for Chronic Obstructive Lung Disease (GOLD) recently defined COPD as "a common 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. Exacerbations and comorbidities contribute to the overall severity in individual patient.[6]

Chronic obstructive pulmonary disease (COPD) is one of the major preventable chronic respiratory diseases (CRD). The Global Initiative for Obstructive Lung Disease (GOLD) describes COPD as a common 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.[7]

COPD is reported to have an estimated disease burden of 210 million people worldwide. 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. Also COPD is a major cause of chronic morbidity; it was ranked 11th in 2002 and is projected to rise to seventh place in 2030. The prevalence of COPD in adults ranges between 0.2% in Japan and 37% in USA. The Burden of Obstructive Lung Disease (BOLD) group recently reported an average global COPD prevalence of 10.1% with wide variations across the participating countries.[8]

COPD affects twice as many males as females, this difference will diminish, given the fact that

more and more females throughout the world have taken up smoking in the past few years in developed countries, and non-smoking females are exposed to biomass combustion products in developing countries.[9] This study was conducted to assess the cases of COPD.

We found that there were 64 males and 60 females. Smokers were 88 and non- smokers were 36. A smoker was defined by the presence of regular smoking of any type i.e. cigarettes, bidis or hookah, for one year or more. Passive smoking, i.e. the exposure to environmental tobacco smoke (ETS) was established from the history of presence of one or more smoker in the family who used to smoke in the presence of the individual.[10]

We observed that most of the patients were having middle status (55%) while 35% comprised of low status and only 10% consisted of high status. COPD is associated with an abnormal inflammatory response of the lungs to noxious particles or gases, most commonly cigarette smoke. Patients with COPD have been reported to have increased numbers of neutrophils in sputum, lung tissue and bronchoalveolar lavage (BAL) and neutrophils are important cells in the pathogenesis of COPD.[11]

## CONCLUSION

Authors found that chronic obstructive pulmonary disease is commonly seen in males and smoking was one of the contributing factors.

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