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HOW BREATHING PATTERNS SHIFT: EXPLORING COPD PREVALENCE

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ABSTRACT

Chronic Obstructive Pulmonary Disease (COPD) is a significant public health concern worldwide, characterized by progressive airflow limitation.[1] This study aims to investigate the prevalence of COPD across various demographics, including age, gender, and smoking history. A systematic review of literature and analysis of existing datasets will be conducted to gather comprehensive data on COPD prevalence. The findings will provide insights into the distribution of COPD among different population groups, informing targeted prevention and intervention strategies to mitigate its burden on healthcare systems and improve patient outcomes.[2]

KEYWORS: COPD.

INTRODUCTION

According to the National Heart, Lung, and Blood Institute, COPD most often occurs in people more than 40 years of age who smoke or have done so earlier in life. Other risk factors, such as long-term exposure to chemicals, may also play a role.[3]

Overall, women smokers are about 50% more likely to develop COPD than men. Furthermore, women with severe COPD have a higher risk of hospitalization and death from respiratory failure.

Tobacco smoke aggravates the airway, triggering inflammation (Irritation and Enlarging) that limits the airways. Smoke also damages cilia so they cannot go about their job of eliminating mucus and trapped particles from the airways.[4]

- Occupation-related exposure to specks of dust, exhaust, or synthetic compounds;
- Indoor air contamination: biomass fuel (Wood, Creature excrement, Crop build-up) or coal is frequently utilized for cooking and warming in low and middle-income nations with elevated degrees of smoke exposure;
- Early life-altering situations, for example, unfortunate development in utero, rashness, and successive or extreme respiratory contaminations in youth that forestall greatest lung development;
- Asthma in youth.
- An interesting hereditary condition called alpha-1 antitrypsin lack, which can cause COPD early on.

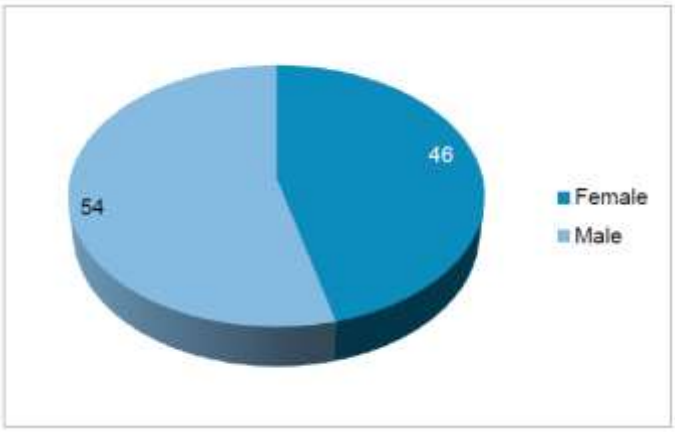
AAT (alpha-1 antitrypsin deficiency) is a phenomenal, acquired disorder that can prompt emphysema. Alpha-1 antitrypsin is an enzyme that safeguards your lungs from the damaging impacts of inflammation. At the point when you have an AAT lack, you don't produce enough alpha-1 antitrypsin. Your lungs are bound to become damaged from exposure to aggravating substances like smoke and residue. It is impractical to recognize COPD related to alpha-1 antitrypsin lack from normal COPD. Consequently, all individuals with COPD ought to get evaluated for AAT deficiency with a blood test.

RESULT AND DISCUSSION

Classification according to patient's gender

Table showing gender distribution of the study population N=100

Gender	Percentage of patients
Female	46
Male	54



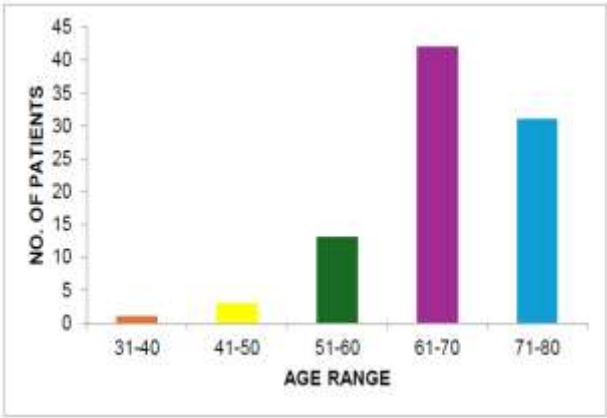
Inference: 54% of the patients diagnosed with COPD in the study were male.

Classification according to age range

Table showing age wise distribution of the study population N=100

Age range	Number of patients	Percentage of patients
31-40	1	0.1
41-50	3	0.3
51-60	13	1.3
61-70	42	4.2
71-80	31	3.1
81-90	10	1

Bar diagram showing age wise distribution of the study population

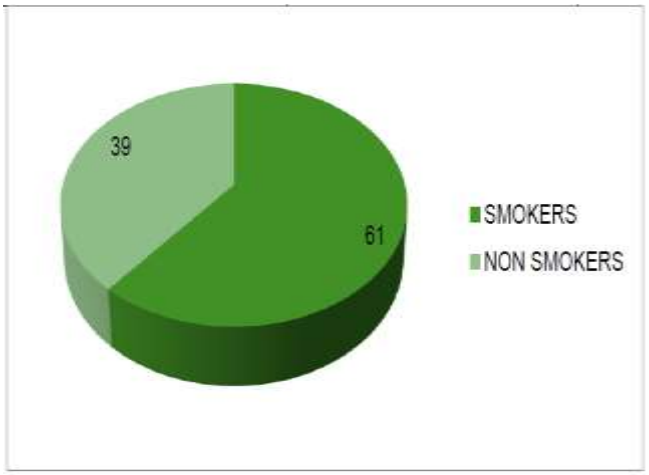


Inference: Most of the cases reported were of the age group 61-70. Patients between 31 and 40 years reported to be affected are of a minimum number.

Classification according to prevalence of copd among smokers and non-smokers

Table showing prevalence of COPD among smokers and non-smokers N=100

Parameters	Percentage of patients
Smokers	61%
Non smokers	39%



Inference: In the study population, prevalence of COPD among smokers is 61% and Among non-smokers it is only 39%

CONCLUSION

In our study, various demographics were studied like age, and gender, and smoking history. One of the major causes of COPD is smoking. The smoking history of patients was collected and concluded that smoking has a significant association with the occurrence as well as exacerbation of COPD. Most patients having COPD among gender wise were male, about 54% and female were around 46%

Male patient are more seen having COPD

Among the age range; COPD was mostly present in age group of 61 to 70 years

Then 71 to 80 year's of age then comes 51 to 60 of age

Least patients were categorized from age 31 to 40

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