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Research Article

Assesment of Depression in Patients Having Chronic Obstructive Pulmonary Disease

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Abstract: Depression in COPD patients is one of commonest problem arising now a days. Most of patients are affected by severe depressive symptoms or clinical depression. It is not easy to diagnose depression in COPD patients because of overlapping symptoms between COPD and depression. Quality of life is strongly impaired in COPD patients and patient's quality of life emerges to be more correlated with the presence of depressive symptoms than with the severity of COPD. In this study four-item Hamilton Depression Subscale appears to be a useful screening tool. In patients with milder depression, pulmonary rehabilitation as well as cognitive-behavioral therapy are effective.

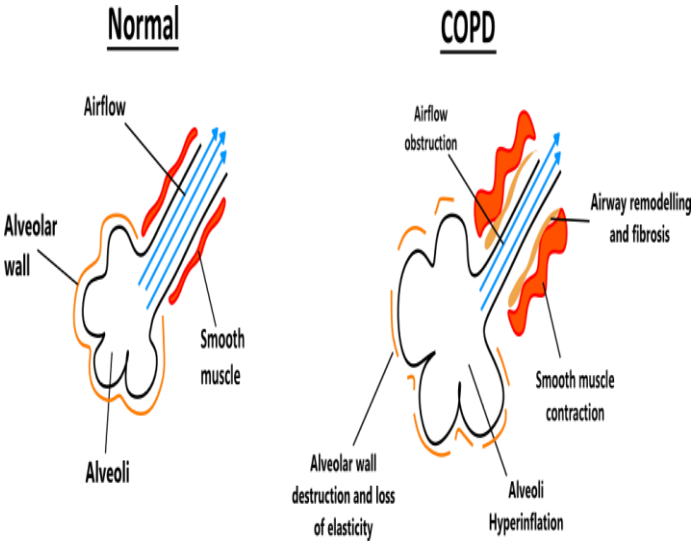
Keywords: ……..

Introduction

Chronic Obstructive Pulmonary Disease (COPD), a common preventable and treatable disease, is characterized by persistent airflow limitation that is due to airway and/or alveolar abnormalities usually caused by significant exposure to noxious particle or gases (Definition according to GOLD-2019).

COPD is one of the fourth leading cause of death in the world. Under-recognised and untreated depression and anxiety symptoms have deleterious effects on physical functioning and social interaction increasing fatigue and healthcare utilisation in patients with chronic obstructive pulmonary disease (COPD). Depression and anxiety are challenging to identify and treat because their symptoms often overlap with those of COPD. There are some promising findings regarding pulmonary rehabilitation, psychological therapy and the collaborative care model in reducing depression and anxiety symptoms in patients with COPD.

Fig-1 Normal and COPD airway



During the past two decades, there has been increasing recognition that patients with chronic obstructive pulmonary disease (COPD) with three or more comorbidities are more likely to be frequently hospitalised and may die prematurely compared with COPD patients without comorbidities[1]. Untreated and under-recognised depression and anxiety symptoms in patients with COPD have deleterious effects on physical functioning and on social interaction, increasing fatigue and healthcare utilisation[2,3]. Specifically, mood disorders, such as major depression, dysthymias (chronic depressive symptoms of mild severity), minor depression and anxiety disorders (generalised anxiety disorder, phobias and panic disorders) are common in patients with COPD[4,5]. In addition, those with severe COPD were twice as likely to develop depression compared with patients with mild COPD[5,6]. Associations between anxiety disorders and COPD appear to be largely explained by confounding factors, such as previous history of cigarette smoking and nicotine dependence[7]. Depression and anxiety may lead to fear, panic and hopelessness, low self-esteem, social isolation and dependence on caregivers, thereby initiating a vicious circle that perpetuates anxiety and depression. A large study examined the prevalence of depression in COPD patients (n=2118), smokers without COPD (n=335) and non-smokers without COPD (n=243)[8]. The prevalence of depression was 26%, 12% and 7% in COPD patients, smokers and non-smokers, respectively.

Material and Methodology: -

Subjects: -

Patients attending Pulmonary medicine OPD above 40 years of age.

Inclusion criteria:

- Having respiratory complains.
- Diagnosed case of COPD through spirometry evalution.

- Patients willing to perform spirometry.
- Paients above 40 years of age.

Exclusion Criteria: -

- Patient unable/unwilling to perform spirometry.
- Clinically unstable patient.
- Patients having underlying cardiac problems.

Study Procedure: -

- This study is carried in Pulmonary Medicine OPD, 90 patients was taken, out of which 70 were male and 20 were females. Informed consent was taken. Patient proper history was taken and subjected to spirometry for evaluation of lung function on the basis of above inclusion and exclusion criteria. Subjects were chosen from the outpatients and inpatients of the wards of our hospital. All patients were clinically stable. Patients were diagnosed on the basis of detailed clinical evaluation and spirometry (FEV1/FVC less than 70% and FEV1 less than 80% predicted)[9,10]. In this study Hamilton Depression rating subscale was used to assess the symptoms of depression in COPD patients. Question asked are listed in table-1 from HAM-D scale.

According to these four question patients were assessed having whether they are having depression or not.

Table-1

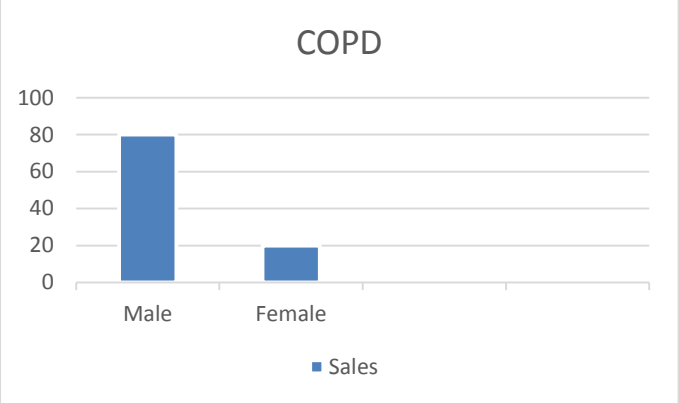
MILTON DEPRESSION SCALE
• Depressed Mood
• Insomnia
• Work and Interest
• Anxiety

Results-

Table-2 Distribution according to male and female

Gender	**Frequency**	**Percentage**
Male	70	78%
Female	20	22%
Total	90	100%

Figure-2 Distribution of COPD according to sex

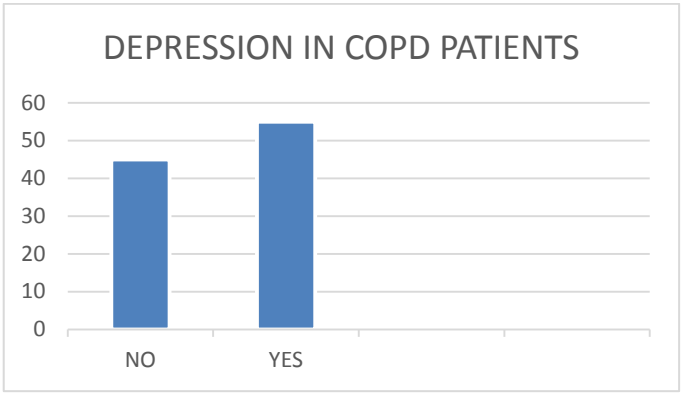


Analysis: In my study of 90 patients 70(78%) were males and 20(22%) were females.

Table-3 Presence of depression in patients with COPD.

Depression		
Presence(Y)/Absence(N)	Frequency	Percent
Y	50	55%
N	40	45%
Total	90	100%

Fig-3 Distribution of COPD patients according to the presence or absence of depression.



Analysis- In my study of 90 patients 55% had symptoms of depression.

Discussion

COPD patients with co-morbid depression have impaired quality of life compared with COPD patients without depression[11,12]. COPD as we all known is a disease involving extrapulmonary comorbidities. Yohannes et al (2003) also showed that COPD patients' quality of life was more correlated to the presence of depressive symptoms than to the severity of COPD as measured by FEV_1. Severe COPD could lead to somatic symptoms impossible to separate from depressive symptoms.

Conclusion

Depression in COPD patients is one the systemic involvement. Hamilton depression sub-scale(HAM-D-4) questionnaire was taken to assess the depression of the patients. In my study of 90 patients, 55% suffered from the symptoms of depression, insomnia, anxiety and loss of work and Interest which was similar to the study of M. Yohannes et al[12] which showed depression and anxiety have deleterious effects on COPD patients and with the study of Kurt B Stage et al[13] showed depression affects around 40% of the patients with COPD.

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