Prevalence of comorbidities including diabetes, hypertension, chronic obstructive lung disease.

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Abstract

COPD is a term used to describe a group of chronic pulmonary inflammatory illnesses characterized by persistent airflow restriction. COPD is one of the main causes of death worldwide, and it is expected to rise to third place by 2020. Comorbidities are widespread among COPD patients, have a significant impact on their prognosis, quality of life, and survival, and are more prevalent in disadvantaged social groups [1].

Keywords: COPD, Diabetes, Hypertension.

Introduction

COPD, like other chronic diseases, is associated with comorbidities, which increase in frequency and severity as people get older. At least 80% of COPD patients are believed to have at least one comorbidity. In patients with COPD, a Number of no Communicable Diseases (NCDs) may develop as a cluster of comorbidities. Heart failure, cardiovascular disease, metabolic syndrome, diabetes, anxiety/depression, and osteoporosis are among the most common comorbidities, according to studies.

For a variety of reasons, comorbidities are quite essential in COPD patients. COPD and other chronic illnesses have similar pathophysiological underpinnings. Some comorbidity, for example, might have a significant impact on health and healthcare utilization, leading to increased severity and hospitalization of COPD patients, while others, such as heart disease, can cause mortality earlier than respiratory reasons.

Common risk factors like smoking, age, and physical inactivity may explain the link between COPD and various comorbidities [2].

Due to no diagnosis or underdiagnoses of COPD, common risk factors for both COPD and comorbidities, lack of comorbidity diagnosis, and comorbidity characteristics that may overlap with those used to define COPD severity, determining the actual prevalence of comorbidities in COPD patients and their association with COPD severity may be difficult. Patients with COPD are thought to have a high prevalence of comorbidities. In Iran, no research has been conducted to assess the prevalence of comorbidities in COPD patients against persons without COPD across a wide age range. As a result, this is the first thorough study in southwestern Iran to establish the prevalence of common comorbidities in COPD patients compared to those without the disease [3].

Chronic obstructive pulmonary diagnosis

Between the hours of 8 a.m. and 2 p.m., all participants underwent a pre-bronchodilator spirometer using a portable spirometer; all tests were administered in a quiet room in a comfortable chair, according to the ATS/ERS.

Before the trial began, skilled personnel calibrated the spirometer using a 3 l syringe on a daily basis. After injecting 3 l of air into the instrument, the spirometer was considered calibrated if the error rate was less than 3% or 90 cc (registration number should be between 2.91–3.09 L). Technicians who use spirometers went through a particular training course in the hospital's pulmonary function laboratory [4].

All participants were kept up to date on the inquiry and the pulmonary function test at all times. The technician demonstrated all steps of the spirometer technique so that the participant could see how to properly inhale and exhale. For each patient, the spirometer was used three times in the same manner as before.

The maximal values for Forced Vital Capacity (FVC), Forced Expiratory Volume in 1 Second (FEV1), Maximum Ventilator Volume (MMV), and maximum Peak Expiratory Flow (PEF) in 75 percent, 50 percent, and 25 percent of FVC (PEF25-75) were obtained by comparing the curves of these three pulmonary function tests.

In 250 ml of blood, a person must have at least two acceptable curves with repeatable FVC and FEV1 values. Two respiratory medicine professionals assessed spirometer data according to the ATS/ERS recommendations. The results of pulmonary function tests were expressed as a percentage of anticipated values for the age, height, and weight of the participants.

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Uncontrolled hypertension above 140/100, myocardial infarction, pulmonary embolism, diagnosed aneurysms, recent surgery on the eyes, ears, brain, belly, and chest, liver, heart, or renal failure, cancer, and endocrine diseases were all contraindications to using a spirometer[5].

Conclusion

According to the Global Initiative for Obstructive Lung Disease (GOLD) standards, COPD is defined as a fixed ratio FEV1/FVC of less than 70%. According to the GOLD guidelines, COPD was defined as a fixed ratio FEV1/FVC > 70, while restrictive spirometer was defined as FEV1/FVC > 0.70 but FEV1 or FVC 80%.

Under the supervision of the lead investigators, a quality control team consisting of doctors, a laboratory specialist, two statisticians, and an epidemiologist monitored the entire data gathering operation.

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