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Research Topic: Incidence of Chronic Obstructive Pulmonary Disease in the Communities



(Boyer, P. 2021)

Introduction

In the United Kingdom, most people suffer from Chronic Obstructive Pulmonary Disease and according to the statistics of the British Lung Foundation show that one point two million people deteriorate from the disease. Chronic obstructive pulmonary disease is an avoidable and curable relapsing chronic lung disease that affects people worldwide. Irregularities in the small airways of the lungs that restrict the flow of air in and out of the lungs, and various surgeries can cause airways to narrow. Chronic bronchitis commits to a chronic cough producing phlegm proceeding from inflammation in the airways. Chronic obstructive pulmonary disease produces constant and continues respiratory symptoms including dyspnoea, cough, and sputum forming. Environmental disclosure to tobacco smoke, indoor air pollution, and occupational dusts, smoke, and chemicals are important risk factors for chronic obstructive pulmonary disease. Chronic obstructive pulmonary disease gives rise to long-run exposure to toxic gases and particles in addition to individual element including incidents and genetics that take hold of the growth of the lung of a child. Preliminary diagnosis and treatment, as well as aid for smoking termination are essential to slow down the development of symptoms and lower attacks. Chronic obstructive pulmonary disease is the third leading cause of death worldwide, giving rise to 3.23 million deaths in 2019. Approximately 90 percent of chronic obstructive pulmonary disease loss of lives in those under seventy years of age transpires in low-and middle-income countries. (WHO, May 2022).

Chronic Obstructive Pulmonary Disease (COPD)

Chronic Obstructive Pulmonary Disease is often misdiagnosed and numerous people who have the disease might not be diagnose until the disease is developed. Signs and symptoms must be reviewed by the Doctor to be diagnose with several tests carried out. The test is called spirometry which is used for smokers over thirty-five with a persistent cough and breathlessness. This test is to establish the following conditions whether you have asthma, chronic obstructive pulmonary disease, and cystic fibrosis. Chronic Obstructive Pulmonary disease evolves over time and is often diagnosed by a group of lung conditions which causes the airways to become narrow. In the case of cystic fibrosis, which is known as the genetic condition, the lungs and digestive system are clogged with a thick and sticky type mucus. Asthma is a long-term illness where it is known that the airways are normally swollen and

narrowed. Pulmonary fibrosis is the scarring of the lungs. The risk factors to chronic obstructive pulmonary disease are exposure through active tobacco smoking or passive exposure to second-hand smoking. Occupational exposure to dust and chemicals, indoor air pollution or in low- and middle-income countries with high exposure to smog, where coal is often used for cooking and heating. Some strategies used by doctors to determine and measure the condition of the patient is by analysing family and medical history and talking through any exposure the patient might have had to lung irritants particularly smoking. Various test will be requested by the Doctor to diagnose the condition. Some of the test comprises of lung pulmonary function test, such tests measure how substantial air the individual can inhale and exhale, and whether the lungs are delivering enough oxygen to the blood. A test called the peak flow which measures how fast you can blow air out of your lungs and the CT scan which identifies any issues with the lungs. Another test includes measuring lung volumes and transmitting volume, a pulse oximetry, and a walk. As reported by the World Health Organization, Chronic Obstructive Pulmonary Disease presently ranks fourth and it is soon to become the third main reason of the loss of life globally. It is also a debilitating disease and therefore related with expensive treatment and controlling patients. Based on my research on Chronic Obstructive Pulmonary Disease, to enhance the quality of life there are several treatments available to patients for them to control their disease for example controlling their conditions themselves by knowing all the facts related to their conditions. In addition, there are two short-term inhalers available which are known as salbutamol and terbutaline, this should be used when a person feels breathless and will provide relief by relaxing and widening their airways. The maximum use is four times a day. The long-term inhalers salmeterol and formoterol which each dose last for twelve hours and only needs to be used once or twice a day. Most of the articles that I have read so far, indicates that many people with chronic obstructive pulmonary disease agrees being active and is recommended that each person participate in a six-week rehabilitation programme at least twice a week. The programme should include exercise, walking, cycling and strength exercise. It is also important that family members are educated around your condition. During the six-week programme, individuals will receive advice and guidance with dietary needs and psychological and emotional support. The aim is to improve symptoms of anxiety and depression. Furthermore, taking part in Pulmonary Rehabilitation is the best way to master how to exercise at the right level. Patient must learn how to control their breathing and having a self-management plan, keeping a healthy weight, and eating well and taking care of their emotional wellbeing. Another proven success called CliniTech Vie a remote monitoring technology has been designed to help patients with Chronic Obstructive

Pulmonary Disease to prevent readmission by the early identification of deterioration, whilst maximising clinical time and resources. According to the National Health Service data system One in five people are being affected by respiratory disease and Chronic Obstructive Pulmonary Disease is one of the biggest causes of death in United Kingdom. The National Health Service data and statistics record shows that a Long-Term Plan has been set out as an aspiration for the organisation to recognise respiratory disease as a clinical prerogative over the next ten years. (NHS England, 2022) The aim of the plan is to direct a goal of investment to improve treatment and support for the people with respiratory disease with an intention to equalize the transformation or go ahead of their international counterparts. The National Health Service also reported on their data system that hospital admissions from lung diseases have gone up over the past seven years at three times the rate of all admissions mostly. The major factor faced by the National Health Service are respiratory disease and, in the winter period the number of admissions become nonelective and doubles in numbers. The National Health Service also reported that it cost them directly eleven billion pounds annually to tackle these respiratory diseases and this has become an annual economic burden for the organisation. Furthermore, audits are a great way to find out what best practice should be and whether the hospital is working hard to accomplish it. It is also a fantastic way to encourage health professionals to strive for best methods, which will improve the lives of all the people with lung disease. In the United Kingdom and around the world morbidity and death is a major cause of Chronic Obstructive Pulmonary Disease and it has been acclaimed that the degree of airflow limitation only partially reflects the burden of disease in an individual patient. Furthermore, Chronic Obstructive Pulmonary Disease patients are disproportionately seen by chest physicians or by pulmonary rehabilitation specialists. Studies have shown that people that has been diagnosed with Chronic Obstructive Pulmonary Disease has an impaired health and functional status and increased risk of death compared to people without Chronic Obstructive Pulmonary Disease. This gives a focal point of essential increase of our understanding of Chronic Obstructive Pulmonary Disease in a wider community without excluding patients with mild to moderate Chronic Obstructive Pulmonary Disease, less noticeable smoking history or specific comorbidities to enhance research outcomes prevalence and clinical significance. (Mayo Clinic, 2020).



In China, the Pearl River runs through Guangzhou, and where dominant levels of smog surge the occurrence of Chronic Obstructive Pulmonary Disease. (Credit: GUY VANDERELST/GETTY IMAGES).

According to the National Health Service data statistics Early readmission is considered more treatable and more curable to hospital-based interventions. High readmission rate and enormous proportion of early readmissions suggest a need to improve the quality of care and procedure received during and instantly after hospitalization. In Beijing a sixth-year trend analysis of a city-wide representative database recorded that a thirty-day readmission rate for Chronic Obstructive Pulmonary Disease increased at an adapted yearly rate of eight percent during 2012 to 2017. Research also shows that the readmission rate of men was higher and develop faster than women. Having comorbid osteoporosis, coronary heart disease, congestive heart failure, and cancer were associated with increased risk of thirty-day Chronic Obstructive Pulmonary Disease related readmission. (Nature, 2022). Chronic Obstructive Pulmonary Disease may cultivate by exposing yourself to other chemicals in the climate that irritates the lungs. According to research genetics may also play a role. Since lung cancer is often fatal, it is therefore essential for people with Chronic Obstructive Pulmonary Disease to avoid factors that further damage the lungs, especially smoking. Furthermore, consequences for clinical practice include the awareness of healthcare professionals acknowledging the fact that individuals with Chronic Obstructive Pulmonary Disease in the general population may experience specific impairment in physical, mental, and social status. A current study also showed that individuals with mild to moderate Chronic Obstructive Pulmonary Disease has slower walking speeds and reported lower values on self-rated health surveys compared to people without Chronic Obstructive Pulmonary Disease. Slow walking speed linked to disability and increased risk of hospitalization and death in patients with moderate-to-severe Chronic Obstructive Pulmonary Disease. The

cognitive impairment that develops in people with dementia is especially prevalent in older adults with Chronic Obstructive Pulmonary Disease making it is more difficult to manage symptoms. Chronic Obstructive Pulmonary Disease is a risk factor for dementia.

Circumstances such as low oxygen and high carbon dioxide levels can harm the brain with Chronic Obstructive Pulmonary Disease, and more cerebrovascular damage from smoking also emulate in developing Chronic Obstructive Pulmonary Disease with dementia. At the time of diagnosis, the age and other health conditions of the individual will be based on life expectancy. Individuals with moderate-to-severe Chronic Obstructive Pulmonary Disease usually have lower life expectancy regardless of their older age. (Healthline, 2022).

Conclusion

In conclusion, Chronic Obstructive Pulmonary Disease patients are more prone to mental health problems than the general population, and healthcare Professionals should be aware of this and go beyond template-based care to conduct mental health assessments at appropriate intervals. A selected treatment of Chronic Obstructive Pulmonary disease depends on the patient needs such as GOLD class and patient choice nonetheless, drug-free, and deterring procedure should all the time be accessed. Prevention procedures as well as vaccination, including new recommendation for Tdap booster vaccine for Chronic Obstructive Pulmonary Disease patients. The development of Chronic Obstructive Pulmonary Disease exacerbations also has a significant effect on healthcare costs and mortality, with more than one in five patients first hospitalized for a Chronic Obstructive Pulmonary Disease exacerbation losing their lives within a year of discharge. This underscores the need to make Chronic Obstructive Pulmonary Disease exacerbations a crucial concern in clinical practice. Furthermore, the significant effect of Chronic Obstructive Pulmonary Disease exacerbations on the mental health of patients should not be undervalued. According to The National Health Service, an improved target on enhancing current clinical practice, supported by evidence-based guidelines, is needed. It also challenges healthcare systems, and government policy to do more to address the enormous outstanding burden of Chronic Obstructive Pulmonary Disease exacerbations.

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