Review of Chronic Obstructive Airway Disease patients admitted at Maamoura Chest Hospital from 2009 to 2012

Thesis

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To My Parents

بسم الله الرحمن الرحيم

قال رب اشرح لي صدرى ويسر لي أمرى
واحلل عقدة من لسانى يفقهوا قولي

صدق الله العظيم

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LIST OF ABBREVIATION

AMP	**:**	Adenosine mono phosphate
CAL	**:**	Chronic airflow limitation
CMV	**:**	Cytomegalo virus
COAD	**:**	Chronic obstructive airway disease
COLD	**:**	Chronic obstructive lung disease.
COPD	**:**	Chronic obstructive pulmonary disease.
CORD	**:**	Chronic obstructive respiratory disease.
CPAP	**:**	Continuous positive airway Pressure
FEV_1	**:**	Forced expiratory volume in one second
FVC	**:**	Forced vital capacity
LTOT	**:**	Long term O_2therapy.
LVRS	**:**	Lung volume reduction surgery
MC	**:**	Slow vital capacity
MDI	**:**	Metered dose inhaler
NIMN	**:**	Non invasive mechanical ventilation
NIV	**:**	Non Invasive ventilation
NPPV	**:**	Non invasive positive pressure ventilation
PSV	**:**	Pressure support ventilation
TLC	**:**	Total lung capacity
EGFR	**:**	Epidermal growth factor receptor
HADS	**:**	Hospital Anxiety and depression scale
PRIME-MD	**:**	Primary Care Evaluation of Menal Disorders
BLVR	**:**	Bronchoscopic Lung Volume Reduction
MMP12	**:**	Matrix Metalloproteinase 12
DPIS	**:**	Dry Powder Inhalers

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AIM OF THE WORK

The aim of this study is to review the COPD cases who were admitted at Maamoura Chest Hospital during the period from 2009 to 2012 as regards distribution of the disease, risk factors of the disease, severity and complications of the disease.

INTRODUCTION

Chronic obstructive lung disease (COLD), chronic obstructive airway disease (COAD), chronic airflow limitation (CAL) and chronic obstructive respiratory disease (CORD), is the occurrence of chronic bronchitis or emphysema, a pair of commonly co-existing diseases of the lungs in which the airways narrow over time ***National Heart Lung and Blood Institute et al 2010*** This limits airflow to and from the lungs, causing shortness of breath (dyspnea). In clinical practice, COPD is defined by its characteristically low airflow on lung function tests ***Nathell L ,et al 2007***. In contrast to asthma, this limitation is poorly reversible and usually gets increasingly worse “Chronic obstructive pulmonary disease (COPD), a common preventable and treatable disease, is characterized by 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 patients."

Worldwide, COPD ranked as the sixth leading cause of death in 1990. It is projected to become the fourth leading cause

of death worldwide by 2030, due to an increase in smoking rates and demographic changes in many countries ***Rabe KF,et al 2007***.

COPD is the third leading cause of death in the U.S.Chronic bronchitis is defined in clinical terms as a cough with sputum production on most days for 3 months of a year, for 2 consecutive years ***Mathers CD and Loncar D 2006***. In the airways of the lung, the hallmark of chronic bronchitis is an increased number (hyperplasia) and increased size (hypertrophy) of the goblet cells and mucous glands of the airway. As a result, there is more mucus than usual in the airways, contributing to narrowing of the airways and causing a cough with sputum. As chronic bronchitis progresses, there is squamous metaplasia (an abnormal change in the tissue lining the inside of the airway) and fibrosis (further thickening and scar ***Burrows B et al 1966***ring of the airway wall). The consequence of these changes is a limitation of airflow.

Patients with advanced COPD that have primarily chronic bronchitis rather than emphysema were commonly referred to as "Blue Bloaters" because of the bluish color of the skin and lips (cyanosis) along with hypoxia and fluid retention seen in them ***Kitaguchi Y ,et al 2006*** .

Lung damage and inflammation of the air sacs (alveoli) causes emphysema. Emphysema is an enlargement of the air spaces distal to the terminal bronchioles, with destruction of their walls ***Paoletti Met al 2009***. The destruction of air space walls reduces the surface area available for the exchange of oxygen and carbon dioxide during breathing. It also reduces the elasticity of the lung itself, which results in a loss of support for the airways that are embedded in the lung. These airways are more likely to collapse causing further limitation to airflow. These people are also known as "Pink Puffers", due to their pink complexion ***Petty TL ,et al 2002***.

One of the most common symptoms of COPD is shortness of breath (dyspnea). People with COPD commonly describe this as: "My breathing requires effort," "I feel out of breath," or "I can't get enough air in" ***Longmore JM, et al 2004***. People with COPD typically first notice dyspnea during vigorous exercise when the demands on the lungs are greatest. Over the years, dyspnea tends to get gradually worse so that it can occur during milder, everyday activities such as housework. In the advanced stages of COPD, dyspnea can become so bad that it occurs during rest and is constantly present.