Study of the outcome of Chronic Obstructive Pulmonary Disease in patients admitted to National Institute for Chest Diseases in Imbaba

Thesis
Submitted for partial fulfillment of
Master Degree in chest diseases

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2016

Acknowledgement

*First and foremost, thanks to **Allah** for all countless gifts. I have been given while asking for support and satisfaction.*

The present work has been accomplished.

*It really gives me unlimited pleasure and honor to express my sincere heartfelt gratitude to **Prof. Adel Khattab**, Professor of chest diseases, Faculty of Medicine, Ain Shams University, who has contributed in this work with valuable assistance and in many different ways. I would like to thank him for devoting much of his time to helpful comments and also for his effort throughout this work and kind supervision.*

*It gives me pleasure to express my great indebtedness and appreciation to **Dr. Nehad Othman**, Assistant Professor of Chest diseases Faculty of Medicine, Ain Shams University, for her kind supervision, unrelenting support, continuous encouragement, valuable scientific guidance, unlimited help and indispensable advice, which were of extreme value, and also for working tirelessly and patiently during revision.*

Finally, but of major importance I would like to express my deepest thanks and profound gratitude to my family for their continuous encouragement during the course of this study.

Somaya Fouad Ahmed

List of Contents

List of abbreviations

AAT	:	Alpha-1-Antitrypsin.
AATD	:	Alpha-1-Antitrypsin Deficiency.
AECOPD	:	Acute Exacerbation of Chronic Obstructive Pulmonary Disease.
AF	:	Atrial Fibrillation.
ATS	:	American Thoracic Society.
BMI	:	Body Mass Index.
BODE	:	Body mass index, airflow Obstruction, Dyspnea, and Exercise capacity index.
BTS	:	British Thoracic Society.
CAT	:	COPD Assessment Test.
CCQ	:	COPD Control Questionnaire.
CDC	:	Centers for Disease Control and Prevention.
COPD	:	Chronic Obstructive Pulmonary Disease.
CRP	:	C – reactive protein.
CT	:	Computed Tomography.
CVDs	:	Cardiovascular Disorders.
CXR	:	Chest X-Ray.
DALY	:	Disability-Adjusted Life Year.
ECG	:	Electrocardiogram.
EGFR	:	Epidermal Growth Factor Receptor.
ERR	:	European Respiratory Review.
ETS	:	Environmental Tobacco Smoke.
FEF	:	Forced Expiratory Flow.
FEV1	:	Forced Expiratory Volume in 1^{st} sec.
FEV1/FVC	:	Forced Expiratory Volume in first second/ Forced Vital Capacity.

List of abbreviations (Cont.)

Fig. No.	:	Figure number.
FVC	:	Forced Vital Capacity.
GOLD	:	Global Initiative for Chronic Obstructive Lung Disease.
HF	:	Heart Failure.
HIV	:	Human Immunodeficiency Virus.
HRCT	:	High Resolution Computed Tomography.
ICU	:	Intensive Care Unit.
IHD	:	Ischemic Heart Disease.
IM	:	Intramuscular.
IV	:	Intravenous.
Kg/m^2	:	kilogram/meter square.
LLN	:	Lower Limit of Normal.
LVRS	:	Lung Volume Reduction Surgery.
MEPHX1	:	Microsomal Epoxide Hydrolase 1.
Mg/L	:	Milligram/litter.
NHLBI	:	National Heart, Lung, and Blood Institute.
MRC	:	Modified Medical Research Council.
NICE	:	National Institute for Health and Clinical Excellence.
NIPPV	:	Noninvasive Positive Pressure Ventilation.
NIV	:	Noninvasive Mechanical Ventilation.
No.	:	Number.
PEF	:	Peak Expiratory Flow.
SD (±)	:	Standard Deviation.
SGRQ	:	St George's Respiratory Questionnaire.

List of abbreviations (Cont.)

TGF-B	:	Transforming Growth Factor-B.
TGF-ь1	:	Transforming Growth Factor beta 1.
TNFα	:	Tumor Necrosis Factor alpha.
UK	:	United Kingdom.
ERS	:	European Respiratory Society.
US	:	United States.
VATS	:	Video-Assisted Thoracoscopy.
WHO	:	World Health Organization.
Mg	:	Microgram.

List of Tables

List of Tables (Cont.)

List of Tables (Cont.)

List of figures

Abstract

COPD is largely preventable but is expensive to treat. Under-recognition and Under-diagnosis of COPD still affect the accuracy of mortality data. However it is clear that COPD is one of the most important causes of death in most countries. A newer projection estimated COPD will be the fourth leading cause of death in 2035. Most of the studied cases were males (84%), only (16%) were females, the mean age was 56.88±13.76 yrs. and the mean BMI was 56.88±13.76 Kg/m2. Most of COPD patients came from rural areas (70%) while (30%) came from urban areas; most of the patients had poor housing (78%). Most of the patients had family size ≥5 (78%). Most of studied cases were low educated and Most of them were blue collar either skilled or non-skilled (56%). The majority of the patients in this study were smokers (86 %).

(36%) of the studied cases became improved while (34%) was stationary and (30%) deteriorated.

Keywords

COPD, Symptoms, functional outcomes, COPD burden, pulmonary function, dysnea index, exacerbations, Inhaled corticosteroid, exercise capacity, quality of life.

Introduction

Chronic obstructive pulmonary disease (COPD) is a preventable and treatable disease state characterized by airflow limitation that is not fully reversible. The airflow limitation is usually progressive and is associated with an abnormal inflammatory response of the lungs to noxious particles or gases, primarily caused by cigarette smoking.

Although COPD affects the lungs, it also produces significant systemic consequences **(1)**.

COPD is one of the most common respiratory problems of adults, is caused in 90% by cigarette smoking. Active smokers are more frequently affected by COPD than ex-smokers and passive smokers **(2)**.

COPD is an important cause of morbidity and mortality in both high- and low-income countries. While active cigarette smoking is the most important preventable risk factor globally, outdoor and indoor air pollutants can cause or exacerbate COPD. Populations in low-income countries are largely exposed to indoor air pollutants from the combustion of solid fuels, which contributes significantly to the burden of COPD-related diseases, particularly in non-smoking women **(3)**.

The limited data available indicate that morbidity due to COPD increase with age. Morbidity due to COPD may be affected by other comorbid conditions **(4)**.

Although COPD is associated with many different co morbidities, cardiovascular disorders (CVDs) are of particular importance, as they are the leading causes of hospitalization and a major contributor of total mortality, accounting for a quarter to a third of all deaths in COPD patients **(5)**.

Under-recognition and Under-diagnosis of COPD still affect the accuracy of mortality data. However it is clear that COPD is one of the most important causes of death in most countries. The Global Burden of Disease Study projected that COPD, which ranked sixth as a cause of death in 1990, will become the third leading cause of death worldwide by 2020; a newer projection estimated COPD will be the fourth leading cause of death in 2035 **(4)**.

Aim of The Work

The aim of the work is to study the outcome of COPD patients admitted to The National Institute for Chest diseases in Imbaba.

Review of Literatures

The history of the term COPD:

In European medical history chronic bronchitis and emphysema are known from the early 19th century. The classical description of emphysema was made by Laennec in 1827, and the term bronchitis is known from the beginning of 19th century and Great Britain **(6)**.

However, not until the fog catastrophe in London in 1952 was there an increased awareness of the concept chronic bronchitis. It was estimated that among those suffering from chronic respiratory and cardiac disease. The London fog catastrophe provided motivation for the British Medical Research Council (BMRC) to guide and support the research in the field of chronic bronchitis during the following years **(7)**.

Over view:

Chronic obstructive pulmonary disease (COPD) is a common respiratory condition involving the airways and characterized by airflow limitation **(8), (9)**.

It affects more than 5 percent of the population and is associated with high morbidity and mortality **(10)**.

It is the third-ranked cause of death in the United States, killing more than 120, 000 individuals each year **(11)**.

As a consequence of its high prevalence and chronicity, COPD causes high resource utilization with frequent clinician office visits, frequent hospitalizations due to acute