Study of Chronic Obstructive Pulmonary Disease Patients in Suez Chest Hospital

Thesis
submitted for partial fulfillment
of the Master degree in Chest diseases

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2015

الأية 32 سورة البقرة

Acknowledgement

Thanks to Allah as we owe him for his great care, support and guidance in every step in our life.

My deepest appreciation and honest feelings are to be expressed towards ***prof. Yasser Moustafa Mohammed*** Professor of chest diseases, Faculty of Medicine, Ain Shams University, for his unlimited help, continuous encouragement and kind supervision. longanimity

I wish to express my sincere feelings of gratitude to ***prof. Gehan Mohammed El Assal,*** Professor of chest diseases, Faculty of Medicine, Ain Shams University, for her valuable scientific guidance, support, supervision, patience, and unlimited help.

Also deepest thanks and profound gratitude to ***prof. Mohammed Farrag*** For his great support and help for achieving this work.

Thanks to my family for their continuous encouragement during the course of this study

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List of abbreviations

AAD: Alpha 1 Antitrypsin Deficiency.
ATS: American Thoracic Society.
BMI: Body mass index.
BODE: B (body mass index), O (airflow obstruction), D (dyspnea) and E (Exercise capacity).
BLT: bilateral lung transplants.
BOLD: The Burden of Obstructive Lung Disease.
BRFSS: Behavioral Risk Factor Surveillance Survey.
CAT: COPD Assessment Test.
Cm: centimeter.
CD4: cluster of differentiation 4
CD8: cluster of differentiation 8
CHRNA3/5: alpha-Nicotinic acetylcholine receptor.
CMV: Cytomegalovirus
COPD: Chronic obstructive pulmonary disease.
CT: Computed tomography.
CXR: Chest x ray.
DALYs: Disability Adjusted Life Years.
D_LCO: Diffusing capacity of carbon monoxide.
DM: Diabetes Mellitus.
€: Euro.
ECOPD: Exacerbation of Chronic obstructive pulmonary disease.
ERS: The European Respiratory Society.
ETS: Environmental Tobacco Smoke.
ESCT: Egyptian Society of Chest Diseases and Tuberculosis.
FAM13A: Family with sequence similarity 13, member A1.
FDG PET-CT: Fluorodeoxyglucose positron emission tomography-computed Tomography.
FEF: Forced Expiratory Flow.
FEV1: Forced expiratory volume in first second.
FEV_1/FVC: Forced expiratory volume in first second/ forced vital capacity.
FVC: Forced vital capacity.

GOLD: Global Initiative for Chronic Obstructive Lung Disease.
GP: general practitioner.
GWAS: Genome-wide association studies.
HHIP: Hedgehog-interacting protein.
HRQOL: Health related quality of life.
Hrs. Hours.
HS: Highly Significant.
ICU: Intensive care unit
IL-1B: Interleukin-1B
IL-8: Interleukin8.
IL-6: Interleukin6.
IM: Intramuscular.
IV: Intravenous.
KCO: The transfer coefficient of carbon monoxide.
Kg/m²: kilogram/meter square.
Kpa: kilopascal.
LE: Egyptian pound.
LLN: Lower Limit of Normal.
LTB4: leukotriene B4.
LVRS: Lung Volume Reduction Surgery.
Min: Minute.
Mm: Millimeter.
MMP: Matrix metalloproteinase
Ml: Milliliter.
MMRC: Modified medical research council.
NETT: National Emphysema Therapy Trial.
NHLBI: National Heart, Lung, and Blood Institute.
NHIS: National Health Interview Survey.
NICE: National Institute for Health and Clinical Excellence.
NIV: Noninvasive ventilation.
NS: Non- Significant
No. : Number.
PaCO2: Arterial partial pressure of CO2.
PaO2: Arterial partial pressure of oxygen.
Pemax: Maximum expiratory pressure.
PH: power of Hydrogen

PHT: Pulmonary Hypertension.
Pimax: Maximum inspiratory pressure
PLATINO: Latin American Project for the Investigation of Obstructive Lung Disease Team(Proyecto Latinoamericano de Investigacio´n Obstruccio´n Pulmonar)
PR: pulmonary Rehabilitation.
PROs: Patient Reported Outcomes.
QCT: Quantitative Computed Tomography
SABAs: Short-Acting Bronchodilators
SaO_2: Oxygen Saturation.
SD: Standard Deviation.
SLT: Single Lung Transplants.
SPSS: Statistical Program for Social Science.
SR: Sustained Release.
TC1 : tissue culture number one
TGF- β: Transforming Growth Factor- Beta.
TIMPs: Tissue Inhibitor of Metalloproteinases
TNF: Tumor Necrosis Factor alpha.
TORCH: Toward a Revolution in COPD Health
$:Dollar
UK: United Kingdom.
µg: Microgram.
US: United States.
V_A/Q: Ventilation/Perfusion ratio mmHg millimeter mercury.
VO2 max: maximum Volume of Oxygen
WHO: World Health Organization.
YLD: Years of Living with Disability.

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Introduction

Chronic Obstructive Pulmonary Disease (COPD) is a common preventable and treatable disease is characterized by persistent 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 ***(GOLD, 2015).***

COPD has been a major public health problem during the 20th century, and will remain a challenge for the foreseeable future. Worldwide, COPD is in the spotlight, because its high prevalence, morbidity, and mortality create formidable challenges for healthcare systems ***(Joan et al., 2011).***

Cigarette smoking is the major risk factor for COPD passive smoking, indoor air pollution, occupational dust exposure and genetic factors are recognized as potential factors contributing to the development of COPD ***(Viegi et al., 2007).***

COPD is frequently associated with other diseases. There is consistent evidence that these comorbidities have a

greater negative impact in COPD patients in terms of quality of life, exacerbation and mortality. Thus, diagnosis and management of comorbidities is an important challenge for the COPD patient ***(A Cavaille`s et al., 2013)***.

COPD affects about 10% of the general population, but its prevalence among heavy smokers can reach 50% ***(Cosio et al., 2009)***.

According to the World Health Organization (WHO), COPD will become the third commonest cause of mortality , and the seventh commonest cause of disability adjusted life years worldwide by 2030 ***(Sara Maio et al., 2012)***.

The epidemiology, demographic, clinical characteristic of the patients and prescription pattern vary significantly between studied Egyptian COPD patients and other studied in different countries; which highlight individuality of each country and necessity of national data on our health problems ***(Elsayed, 2007)***.

Prevalence, morbidity and mortality in Egypt are still lacking and have to be estimated; however COPD is arising significant health problem in Egypt ***(Egyptian Society of Chest Diseases and Tuberculosis, 2003).***

Aim of the work

The aim of this work is to study two hundred COPD patients in Suez Chest Hospital divided equally to one hundred patients attending outpatients clinic and one hundred patients admitted to the hospital during period from January 2013 to June 2014 as regard: demographic characteristic of the patients, clinical characteristic of the patients and available prescription pattern.