Study of Addiction in Newly Diagnosed Patients of Pulmonary Tuberculosis in Abbasia Chest Hospital

Thesis

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Chest Diseases and Tuberculosis

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Abstract

Background: Tuberculosis (TB) is an infectious bacterial disease caused by Mycobacterium tuberculosis, which most commonly affects the lungs. It is transmitted from person to person via droplets from the throat and lungs of people with the active respiratory disease. Approximately 9.4 million new cases and 1.7 million deaths were encountered per year worldwide.

Aims: The aim of this work is to study the relation between Addiction and the disease (tuberculosis) in Newly Diagnosed Pulmonary Patients attending to outpatient clinic or admitted to Abbasia Chest Hospital between August 2015 to April 2016.

Methodology: This is a prospective study, which was conducted upon addict patients who were diagnosed as new cases of pulmonary tuberculosis (positive sputum for ZN stain) at different departments and intensive care units in Abbasia chest hospital during eight months from August 2015 to April 2016 to detect the relation between Addiction and the disease (tuberculosis).

Results: In this study, all the patients were low socioeconomic class males (31% prisoners) who were diagnosed as new cases of pulmonary tuberculosis. The mean of age was 33.7 years, more than half of them were single also more than half of them were sever smokers.

Conclusion: There is some degree of relationship between addiction and incidence and severity of pulmonary tuberculosis regarding radiological findings in chest X-ray, HIV infection and mortality rate among cases of the study.

Recommendations: Drug addiction is a major public health problem that needs to be studied from different aspects. Studies are needed in different regions of the community, ages, socioeconomic and educational standards, reasons for which drug addicts started addiction, awareness of health risk and the reasons for drug addiction.

Keywords: Pulmonary Tuberculosis, Mycobacterium Abbasia Chest Hospital

Contents

List of Abbreviations

AFB	Acid fast bacilli
ALT	Alanine aminotransferase
AST	Aspartate aminotransferase
BCG	Bacille Calmette-Guerin
CT	Computed tomography
CXR	Chest x-ray
DOTS	Direct Observed Therapy Strategy
DSM lll	Diagnostic and Statistical Manual of Mental Disorders 1987
ER	Emergency room
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HIV	Human immunodeficiency virus
ICD 10	International statistical classification of diseases and related health problems
ICU	Intensive care unit
IDU	Intravenous drug users/Injection drug users
IGRA	Interferon gamma release assay
INH	Isoniazide
LTBI	Latent tuberculosis infection
M.tuberculosis	Mycobacterium tuberculosis
MDMA (Ecstasy)	3,4-methylenedioxymethamphetamine
P-A	Postero-anterior
PAS	P-Amino Salicylic acid

PCR	Polymerase Chain Reaction
POSIT	Problem oriented screening instrument for teenagers
PZA	Pyrazinamide
RIF/R	Rifampicin
SCC	Short Course Chemotherapy
SD	Standard deviation
STD	Sexually transmitted disease
TB	Tuberculosis
THC	Tetrahydrocannabinol
US	United states
WHO	World Health Organization
ZN	Ziehl-Neelsen

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INTRODUCTION

Tuberculosis (TB) is an infectious bacterial disease caused by Mycobacterium tuberculosis, which most commonly affects the lungs. It is transmitted from person to person via droplets from the throat and lungs of people with the active respiratory disease ***(Global tuberculosis report 2013).***

Approximately 9.4 million new cases and 1.7 million deaths were encountered per year worldwide ***(Rudeeaneksin et al., 2012).***

Tuberculosis (TB) continues to be one of the major causes of death and disability. The Global Burden of Disease Study estimated that in 2004 TB was responsible for 2.5% of global mortality (among men 3.1%; women 1.8%) and 2.2% of global burden of disease (men 2.7%; women 1.7%), with more impact in developing countries ***(WHO, 2008).***

The Center for Disease Control and Prevention (CDC) states that one-third of the world's population is infected with MTB resulting in annually approximately 1.80 million deaths worldwide ***(WHO, 2011).***

Tuberculosis (TB) remains a major public health burden in many developing countries. Approximately 1.3

billion people smoke tobacco products and most of them live in low- or middle-income countries, where the burden of TB is also very high ***(Shafey et al., 2004).***

Drug addiction is the use of Drugs in ways, which are not medically approved because they cause strong feeling of euphoria or they alter perception of the user leading to physical and psychological dependence ***(Dhingra et al., 2008).***

The physiological effects of drug use, along with the environment and risk behaviors of drug users, may all contribute to the high prevalence of TB among drug users. A number of in vitro studies have demonstrated deleterious effects of drug use on the immune system ***(Friedman et al., 2003).***

Drug addiction in tuberculosis can lead to not only the spread of tuberculosis but also of other diseases due to their immune compromised status ***(Abalkhail, 2001).***

Drug users and injection drug users in particular, have driven TB epidemics in a number of countries ***(Robert et al., 2009).***

Drug use is frequently associated with a number of epidemiological factors, including tobacco use, homelessness, alcohol abuse, and incarceration, that confer additional risk of TB ***(Niveau, 2006).***

Current evidence shows that cannabis smokers are more at risk of developing a range of infective lung conditions ***(Nguyen et al., 2010).***

Cannabis smokers are at increased risk of developing legionnaires' disease. Several studies report cannabis smokers developing tuberculosis ***(Oeltmann et al., 2004).***

Aim of the Work

The aim of this work is to study the relation between Addiction and the disease (tuberculosis) in Newly Diagnosed Pulmonary Patients attending to outpatient clinic or admitted to Abbasia Chest Hospital between August 2015 to April 2016.

Pulmonary Tuberculosis

Definition

TB is an infectious disease caused by the bacillus Mycobacterium tuberculosis. It typically affects the lungs (pulmonary TB) but can affect other sites as well (extra pulmonary TB). The disease is spread in the air when people who are sick with pulmonary TB expel bacteria, for example by coughing. In general, a relatively small proportion of people infected with M. tuberculosis will develop TB disease; however, the probability of developing TB is much higher among people infected with HIV. TB is also more common among men than women, and affects mostly adults in the economically productive age groups ***(Global Tuberculosis Report, 2013).***

History of Tuberculosis

Tuberculosis (TB) has a long history. It was present before the beginning of recorded history and has left its mark on human creativity, music, art, and literature; and has influenced the advance of biomedical sciences and healthcare. Its causative agent, *Mycobacterium tuberculosis,* may have killed more persons than any other microbial pathogen ***(Daniel, 2006).***