# Investigate the Prevalence of TB Patients Referred to TB Healthcare Industry

\*Sarami Abdollah<sup>1</sup>, Shahba Nariman<sup>2</sup>, Zahabi Alireza<sup>3</sup>, Salehi Seyedparviz<sup>4</sup>, Chehrazi Behnam<sup>5</sup>

1- Infection. Specialist<sup>1</sup>, 2-Dermatologist, 3-Occupational MedicineResident, 4-General Physician,5-Lab.Technologist<sup>5</sup>. \*Corresponding Author: <u>drsarami@yahoo.com</u>.

**Abstract:** The World Health Organization (WHO) estimates that more than one-third of the World's population is infected with *Mycobacterium tuberculosis*. Even in the developed world, TB rates are stable at best, and actually increasing in many areas. This is due to factors such as immigration, HIV and other immunosuppressive conditions. Tuberculosis is an infectious disease that is transmitted through the air. Patients with pulmonary tuberculosis are infected in this study (39.5%) people are included. This study was performed in since 2001-2006 years in patients referred to TB Ahwaz oil industry. The numbers of Patients were 48 with diagnosed pulmonary tuberculosis and pulmonary that they were treated with drugs. 19 (39.5%) smear-positive pulmonary tuberculosis, 6 cases of scrofula (12.5%), 4 TB neck and axillary lymph nodes (20.8%), 7 cases of renal tuberculosis (14.5%) and 4 cases of TB in smear-negative patients were diagnosed. [A. sarami. Investigate the Prevalence of TB Patients Referred to TB Healthcare Industry. Life Science Journal. 2012;9(1):35-38] (ISSN: 1097-8135). http://www.lifesciencesite.com

#### *Key words*: Tuberculosis, prevalence

## 1. Introduction

Tuberculosis is an infectious disease that is transmitted through the air. Patients with pulmonary tuberculosis are infected in this study (39.5%) people are included.

Human tuberculosis (TB) is a highly contagious bacterial infection that is passed from person to person through droplets in the air. It is usually spread by coming in contact with an infected person who is actively coughing or talking. Infection is caused by the bacteria multiplying inside the body, causing tissue and organ damage. Without treatment, half of those with active TB infection will die. Most people know TB as a disease that is in the lungs. However, not all active TB disease is in the lungs. Around 40% of people who have active TB disease have the infection in another part of their body (e.g., lymph glands, brain, spine, kidneys, or other organs). This occurs when the bacteria spread outside of the lungs. In these cases, TB is more difficult to diagnose since the patient does not have the normal signs and symptoms associated with pulmonary TB.

TB bacilli are spread by coughing or sneezing, talking, and therefore these patients should be isolated from the other person if the person with untreated tuberculosis can infect 15-10 people can. In many of these people, the TB bacilli and surrounded by the immune system remain dormant.

With weakened immune systems of these bacilli to a dormant TB bacillus become active and can cause disease. Totally  $\frac{1}{3}$  World populations are infected with TB bacilli and only 5-10this people, tubercle bacilli in the stage of your life to be suffering from active tuberculosis. TB was a rare disease in developed countries until 1985, the prevalence of HIV in TB patients in the growing community.

35% of global tuberculosis in sub-Saharan Africa, Southeast Asia has occurred in view of the above amount is estimated to be 350 case in per 100000 and 1.7 million people died from TB in 2009 due to have lost most of the deaths occurred in Africa.

Iran is located in the Eastern Mediterranean Region of WHO, the incidence of multiple divisions in the region of 7.61% and the number per 110 inhabitants is 100000. The prevalence per 180 populations is 100000, which include old tuberculosis in a given time is new mortality rate to 18 per person is 100000.

Although the epidemiology of **tuberculosis**, a disease agent is known and the principles of treatment of about 60 years ago and more than a quarter century as a treatment regimen that used for the short term, but part of the TB patients Yet in many parts of the world including our country undiagnosed and or are not treated properly, and unfortunately we now see that the same shortcomings and the increasing cases of HIV infection, the emergence and spread of multidrug-resistant tuberculosis bacilli (Multi - Drug Resistant TB = MDR-TB) is collected.

Despite being the most common causes of failure in global TB control and lack of government support and shortcomings in the health systems of countries considered, but in many cases, these **doctors** are following such reasons, the delay in diagnosis and mistake patients and hence the formation of the world's failure to play a significant role:

- a. Excessive reliance on the use of radiology in the diagnosis and microscopic examination of sputum,
- b. prescribe the wrong treatment regimens, and lack of scientific credibility,
- *c. treated with doses of medication errors and / or inadequate treatment,*
- d. Shortcomings in monitoring patients during treatment,
- e. Follow up and evaluation of the shortcomings identified by people in contact with patients (especially family members of patients with positive pulmonary TB).

However, these errors result from negligence by anyone and is not something that any government other than wasting assets, issued a cease-morbid diseases and the emergence of multidrug-resistant tuberculosis as fatal (MDR-TB) treatment is impossible if would be difficult and expensive.

# **Tuberculosis history**

## 3000 years BC

• Tuberculosis of the spine was found in Egyptian mummies.

• Tuberculosis in the law of Manu in India as one of the reasons for the prohibition of marriage with a girl who has had TB disease in their ancestors.

• Cited in ancient Chinese medicine to tuberculosis.

• Referring to the Greek historian Herodotus in Egypt as the center for TB treatment

#### BC 700 years

• The cult of the prophet Zoroaster in the disposal of sputum transmission

# 500 years BC

• Fully described and mentioned the great Greek physician Hippocrates health problems and complications of tuberculosis by

300 years BC

• Aristotle refers to tuberculosis

# The first century AD

• Galen's experimental medicine and drugs as described in relation to TB treatment is applied. He believed that to prevent the spread of disease, TB patients should be isolated from healthy individuals.

# Sixth to eighth century AD

• Abu Bakr Mohammad Zakaria Razi described by tuberculosis in the book Alhavy

He is the first doctor in connection with tuberculosis of bones and organs are discussed.

# The tenth century AD

• Provide valuable information in relation to clinical and pathological disease by Sheikh Alryys Avicenna (980-1037 AD) in the book.

Eleventh century

• Interesting presentation about tuberculosis in the book store Kharazm by Sydasmayl Jarjani (1135 AD)

1548

• Founded the science of epidemiology by Frakastrv Italian (1548 AD) and the theory of intervention implemented in a non-factor for the transmission of tuberculosis.

1972

• Pyrazinamide use as a drug of drug-resistant TB, reduce the period to at least 6 months of TB treatment

1982

• TB control until 2000, based on the optimistic theory decreased risk of mortality from tuberculosis in Buenos Aires Complex

1985

• Rising curve of tuberculosis mortality in the world and the first epidemic (World of return) and the second epidemic (associated with HIV infection and tuberculosis) as well as all of the new (Modern Epidemic) has suggested.

1991

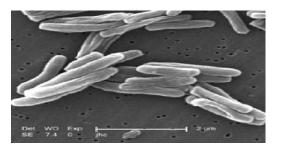
• The incidence of the tuberculosis epidemic of the few drugs and TB control targets by the World Health Organization 2000

1993

• Access to 20 million TB patients in the session in Paris and declared tuberculosis a <u>global</u> <u>emergency</u> and failure to acknowledge the World Health Organization program to fight tuberculosis in most developing countries in recent years.

#### Classification

-Kingdom	Bacteria.		
-Phylum	Actinobacteria.		
-Order	Actinomycetales.		
-Suborder	Corynebacteriaceae.		
-Family	Mycobacteriaceae.		
-Genus	Mycobacterium.		
-Species	M. tuberculosis		
approximately (100	)) species		



Mycobacteria are Gram-resistant (waxy cell walls), non-motile, pleomorphic rods, related to the Actinomyces. Most Mycobacteria are found in habitats such as water or soil. Tuberculosis, MTB or TB (short for tubercles <u>bacillus</u> However, a few are intracellular pathogens of animals and humans. Mycobacterium tuberculosis, along with M. bovis, M. africanum, and M. microti all cause the disease known as tuberculosis (TB) and are members of the tuberculosis species complex. Each member of the TB complex is pathogenic, but M. tuberculosis is pathogenic for humans while M. bovis is usually pathogenic for animals.

Today, tuberculosis and HIV are a deadly two-fold because it helps accelerate the progress of each of these diseases.

AIDS weakens the immune system with a person's risk for fatal form of tuberculosis can be favorable. Tuberculosis is a major cause of death in AIDS patients.

# 2. Results

The study took the form of pulmonary tuberculosis was often involved in this center (39.5%).

The most common form of pulmonary involvement of axillary lymph node involvement and neck secretary (32.3%) and renal tuberculosis incidence (7.5%) was observed.

Forms of pulmonary tuberculosis from the pericardial TB - Pleural, eye & abdomen - abscess of the chest - and each one case of miliary tuberculosis is reported.

Cell involvement in the family was a member of a people with active pulmonary tuberculosis and pulmonary tuberculosis, pleural involvement of the family after receiving treatment for active pulmonary tuberculosis were the three methods were completely cured Dots.

Total of 19 patients with pulmonary tuberculosis in 11 cases (57.8%) is seen in women and that 29 cases were reported in the lung (68%) were most common in women.

Total (68.5%) patients are women. 73% of TB patients living in areas with low income that is included with TB usually has a hand in the poor areas.

# 2.1. The prevalence of pulmonary tuberculosis

The highest prevalence was observed in 19 cases of pulmonary tuberculosis at the age of 2-3 to 9 people. In 29 cases had pulmonary tuberculosis meets the highest number in the 4-5 and 5-6 to No. 8 and 7 were.

During treatment of patients with side effects as nausea, regurgitation - severe itching, jaundice,

abdominal pain who do complain of simple arrangements and problems were resolved and treatment was continued. Two-year clinical follow up of all patients are good.

## Table1. The prevalence of pulmonary tuberculosis

Total : 29 Patients		Total: 19 Patients	
No.	×10	No.	×10
2	1-2	9	2-3
2	2-3	3	3-4
4	3-4	2	4-5
9	4-5	4	5-6
7	5-6	4	5-6
2	6-7	-	1
3	7-8	-	-
1	8-9	-	-

## Acknowledgment

AUTHORS ACKNOWLEDGE THE SUPPORT BY Department of health and great oil hospital Ahvaz, Iran

## Contact us:

Department of health and great oil hospital, Ahwaz, Khuzestan, IRAN,

Dr **Sarami Abdollah**, Telephone: 09161136099 Work Fax: 06114450710 E-mail: drsarami@yahoo.com

# Reference

- Beaman BL, Beaman L: Nocardia species: host-parasite relationships. Clin Microbiol Rev 7:213, 1994
- 2. Bloom BR (ed): Tuberculosis -Pathogenesis, Protection and Control. ASM Press, Washington, DC, 1994
- Camus JC, Pryor MJ, Médigue C, Cole ST (October 2002). "Re-annotation of the genome sequence of Mycobacterium tuberculosis H37Rv". Microbiology (Reading, Engl.) 148 (Pt 10): 2967–73. PMID 12368430. <u>http://mic.sgmjournals.org/cgi/pmidlookup?</u> view=long&pmid=12368430.
- 4. Collins C, Grange J, Yates M. Organization and practice in tuberculosis bacteriology. London, Butterworths, 1985.
- Cole ST, Brosch R, Parkhill J, et al. (June 1998). "Deciphering the biology of Mycobacterium tuberculosis from the complete genome sequence". Nature 393 (6685): 537–44. doi:10.1038/31159. PMID 9634230.

- de Kantor IN, Laszlo A. (1997). Tuberculosis laboratory procedures for developing countries. In: Gangadarham P, Jenkins PA, eds. Mycobacteria: basic aspects. Vol. 1. New York, Chapman and Hall, 1997.
- Johnson JL, Elner JJ, Shiratsuchi H: Monocyte-Mycobacterium avium complex interactions: studies of potential virulence factors for humans. Immunol Ser 60:263, 1994
- Hasegawa N et al. (2002). New simple and rapid test for culture confirmation of Mycobacterium tuberculosis complex: a multicenter study. Journal of Clinical Microbiology, 2002, 40(3):908–912.
- 9. Kent PT, Kubica GP. Public health mycobacteriology: a guide for the level III laboratory. Atlanta, GA, United States Department of Health and Human Services, Centers for Disease Control, 1985.
- 10. Krahenbuhl JL, Adams, LB: The role of the macrophage in resistance to the leprosy bacillus. Immunol Ser 60:281, 1994
- 11. Leao S et al. Practical handbook for the phenotypic and genotypic identification of mycobacteria. Brugge, Belgium, Van den Broele, 2005.
- 12. Laboratory services in tuberculosis control. Part III: Culture. Geneva, World Health Organization, 1998.
- Modlin RL: Th1-Th2 paradigm: insights from leprosy. J Invest Dermatol 102:828, 1994
- 14. Reichman LB, Hershfield ES (eds): Tuberculosis - A Comprehensive International Approach. Marcel Dekker, New York, 1993
- 15. Rigsby MO, Curis, AM: Pulmonary disease from nontuberculous mycobacteria in patients with human immunodeficiency virus. Chest 106:913, 1994
- Ryan KJ, Ray CG (editors) (2004). Sherris Medical Microbiology (4th ed.). McGraw Hill. ISBN 0-8385-8529-9.
- 17. Rom WN, Garay S (eds): Tuberculosis. Little, Brown and Co, New York, 1995
- Shinnick T (ed): Tuberculosis. Curr Top Microbiol Immunol, Springer-Verlag, Heidelberg, 1995
- Vincent V, Gutiérrez MC. Mycobacterium: laboratory characteristics of slowly growing mycobacteria. In: Manual of clinical microbiology. Washington, DC, American Society for Microbiology, 2007:573–588.

20. Extera Links:

http://www.oxfordimmunotec.com/FAQ\_He althcare\_Professionals\_North\_America http://www.oxfordimmunotec.com/About\_T uberculosis\_North\_America

11/27/2011