ORIGINAL ARTICLE

# FREQUENCY OF VARIOUS PRESENTATIONS OF TUBERCULOSIS IN PESHAWAR

**Sheema Khan**

Department of Medicine, Khyber Medical College, Peshawar, Pakistan

## ABSTRACT

**Background:** Tuberculosis is classified as pulmonary or extra-pulmonary. This study was conducted to determine the frequency of different presentations of tuberculosis in a tertiary care hospital.

**Material & Methods:** This descriptive study was conducted at T.B centre, Hayatabad Medical Complex, from January 2005 to June 2010, on 323 patients with tuberculosis. Patients were evaluated with a detailed history and clinical examination, before subjecting them to investigations as chest x-ray, sputum smear examination and tissue biopsy.

**Results:** Out of 323 patients, 196(60.68%) had pulmonary tuberculosis, of which 153(70.06%) were sputum smear positive and 43(28.10%) negative. One hundred & twenty-seven (39.31%) had extra-pulmonary tuberculosis out of which 62(48.81%) had pleural, 51(40.15%) had lymph node involvement, 6(4.72%) had cariesspine, 6(4.72%) had abdominal, and 2(1.57%) had bone involvement.

**Conclusion:** Majority of the patients with tuberculosis present with pulmonary disease. Majority of patients with extra-pulmonary TB has pleural involvement.

**KEY WORDS:** Tuberculosis, Pulmonary tuberculosis Extrapulmonary tuberculosis.

## INTRODUCTION

Tuberculosis, one of the oldest diseases known to affect human, is caused by bacteria belonging to the Mycobacterium tuberculosis complex.[1,2] More than 3.8 million new cases of tuberculosis - all forms (pulmonary and extra-pulmonary), 90% of them from developing countries, were reported to the World Health Organization (WHO) in 2001.[3] Number of cases have declined after an increase in late 1980s, which was largely attributed to factors as HIV co-infection, poverty, overcrowding and drug abuse. In 2002, 15075 cases of tuberculosis were reported to the U.S Centres for Disease Control and Prevention (CDC) a 43% decrease from the 1992 peak.[4]

M. tuberculosis in patients with pulmonary tuberculosis is aerosolized by coughing, sneezing or speaking. The smallest ($<10\,\mu$m) droplets may remain suspended in air for several hours, and gain access to terminal air passages when inhaled. There may be as many as 3000 infectious nuclei per cough.[5] Important determinants of transmission are contact with a case of tuberculosis, duration of contact, degree of infectiousness of the case, and the shared environment of the contact.[6] Tuberculosis patients whose sputum contains as many as $10^5$ AFB/ml, usually have cavitary pulmonary lesions, play the greatest role in the spread of infection. Patients with smear negative/ culture positive tuberculosis are less infectious and those with culture negative and extra-pulmonary disease are essentially non-infectious.[7]

Tuberculosis is classified as pulmonary or extra-pulmonary. Pulmonary tuberculosis can be categorized as primary or post-primary. The extra-pulmonary sites commonly involved in order of frequency are lymph nodes pleura. genitourinary tract, bones, joints, meninges, peritoneum and pericardium.[8]

Lack of adherence to treatment is recognized world wide as the most important impediment to cure.[9]

## MATERIAL AND MEHTODS

It was a descriptive study carried out on all patients registered at the tuberculosis centre, Hayatabad Medical Complex from January 2005 to June 2010. These patients were diagnosed with tuberculosis after chest x-ray, sputum smear examination, or histological diagnosis. Patients were divided into two groups. Group A patients had pulmonary tuberculosis and were further categorized as sputum smear positive and sputum smear negative. Group B patients had extrapulomanry tuberculosis. The frequency

**Table 1: Frequency of various presentations of tuberculosis (n=323).**

| Type of TB | Pulmonary SSP | SSN | Extra-pulmonary | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Sputum smear positive | Sputum smear negative | Pleural | Lymph node | Caries spine | Abdominal | Bone | Total |
| Number of Patient | 153 (70.06%) | 43 (28.10%) | 62 (48.81%) | 51 (40.15%) | 6 (4.72%) | 6 (4.72%) | 2 (1.57%) | |
| | 196 (60.68%) | | 127 (39.31%) | | | | | 323 |

of involvement of different extrapulmonary sites was also determined. Patients personal and clinical profile was collected on a pre designed questionnaire.

## RESULTS

A total of 323 patients were registered at TB center Hayatabad Medical Complex. Out of 323 patients, 196 (60.68%) had pulmonary tuberculosis, 153 (70.06%) were sputum smear positive and 43(28.10%) sputum smear negative. Out of 323, 127 (39.31%) patients had extrapulmonary T.B. 62(48.81%) had pleural, 51 (40.15%) had lymphnode involvement, 6(4.72%) had spinal, 6(4.72%) patients had abdominal kocks and 2(1.57%) had bone involvement. (Table 1)

Out of 323, 206 (63.77%) patients are female and 117 (36.22%) patients are males. The age range was from 13 years to 74 with a mean of 43.50. Majority of patients were between the age of 15-24 years.

## DISCUSSION

Tuberculosis is one of the most important diseases in the history of humanity, and remains an extraordinary burden on human health today.[10]

The clinical presentation of active TB is highly variable depending on the site and extent of disease, and immune status of the host. For clinical purposes, tuberculosis is of two types; pulmonary and extra-pulmonary with considerable clinical heterogeneity within these categories.

Extra-pulmonary tuberculosis is defined as the disease outside the lung parenchyma, and pleural tuberculosis is the most common extra-pulmonary site of disease in USA.[11] This is in agreement with our study in which 39.31% patients had extra-pulmonary tuberculosis and among these 48.81% had pleural involvement.

According to other studies, the systems most frequently involved are pleura 20-25%, lymphatic 20-40%, genitourinary 5-18%, bone/joint 10%, central nervous system 5-7%, abdominal 4% and disseminated 7-11%.[12]

In our study the frequency of different extrapulmonary sites was pleural in 48.8%, lymph nodes 40.15%, spinal 4.72%, abdominal 4.72% and bone in 1.57% patients. This data is in accordance with the international studies.

## CONCLUSION

Majority of the patients with tuberculosis present with pulmonary disease. Majority of patients with extra-pulmonary TB has pleural involvement.

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**Corresponding author:**

Dr. Sheema Khan

Medical B Unit

Khyber Teaching hospital

Peshawar, Pakistan

E-mail: drsheemakhan@yahoo.com