



Epidemiological Study of Tuberculosis

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Abstract:

Among infectious diseases on the surface of the globe Tuberculosis (TB) is a leading cause of mortality and morbidity. The present study describes the distribution of TB in the district Dir (L). The objectives of the current study were to determine the prevalence of TB in district Dir (L), based on gender wise and age wise distribution. This descriptive study covers the period October 2009 to December

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2009. The data is collected from the hospitals and the TB center located in district Dir (L). A designed performa was used for the collection of data. A sample size of 331 TB patients was selected, in which 110 were positive for TB (32.23%). It was observed that the highest burden of TB cases has been found in female as compared to male with a ratio of 54.55% and 45.45% respectively. High occurrence of TB was recorded in the age group of 15-64 years (82.72%). It is concluded that TB is prevalent in Dir (L).

Key words: Tuberculosis, Mortality, morbidity, prevalent causes.

Introduction

Tuberculosis (TB) is one of the major global health problems, especially in developing countries. The causative agent of tuberculosis is *Mycobacterium tuberculosis*. The seasonal farmworkers and migrants are at greater risk of becoming infected with TB than the general population (Arcury 2007). In 2006, world-wide, 9.2 million new tuberculosis cases were diagnosed, an increase of 100,000 cases compared to the previous year, a fact that researchers attribute to the population increase. In 2006 the global prevalence of TB cases was 14.4 million and 1.7 million people died from the disease (WHO 2008). Pakistan is the leading country in the Eastern Mediterranean (EMRO) region where the rate of tuberculosis is high. In this area, approximately 44% tuberculosis cases are to be found. From tuberculosis, nearly two million people die worldwide, among these 70,000 from Pakistan. Across the country, every year 250,000 fresh cases of TB develop, the disease being mostly developed in the productive age. TB also causes poverty due to the infecting of the working population (Munch 2003).

Methods

The aim of the current study is to determine the prevalence of TB in district Dir (L). A descriptive epidemiological study was conducted during the period from

October 2009 to December 2009 in district Dir (L) Khyber Pakhtunkhwa Pakistan. The data is collected from hospitals (DHQ Timergara, THQ Chakdara, THQ Samar Bagh, RHC Munda, RHC Shamshi Khan, RHC Gul Abad, RHC Lal Qilla) and TB center (Ouch) of district Dir (L). For the purpose of data collection a designed performa is used, regarding date of registration, gender, age and patient address. A total sample size of 331 TB patients was selected. The analysis of the data was done gender wise and age wise.

Results and Discussions

The ethical authority of respective hospitals and TB center approved the study. A total of 331 cases were registered during the period October 2009 - December 2009. Out of the total 331 registered cases, 110 (33.23%) were found to be positive and 221 (66.77%) were negative as shown in Figure 1. The results of our study are similar to others (Shafqat and Jamail 2012; Sultan et al. 2012). Shafqat and Jamail (2012) reported 34% TB cases in Iqbal Town and Madina Town of Faisalabad, while Sultan et al. (2012) reported 32.02% TB cases among the local population of Peshawar.

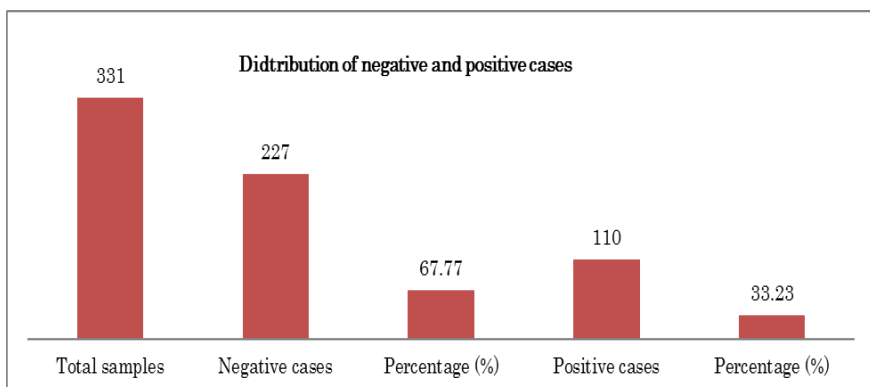


Figure 1: Distribution of negative and positive TB patients in Dir (L)

Gender wise occurrence

In the present investigation it has been found that the overall tendency to get TB was higher in female population (of the area included in our study) as compared to male population and the recorded ratio of occurrence was 54.55% (60/110) and 45.45% (50/110) respectively (Figure 2). The gender wise occurrence of TB is comparable with the findings of others (Shafqat and Jamail 2012; Sultan et al. 2012; Ullah et al. 2008; Ahmad and Ali 2013). The possible reason for the high tendency of TB in females is that they have to face certain problems to visit a healthcare center: no early medical care, ignorance, poor hygiene, poorer nutritional status, war and economic depressions, lack of proper treatment protocol, lack of knowledge regarding the treatment and precautionary measures of disease because the patient of TB stopped her treatment before the completion.

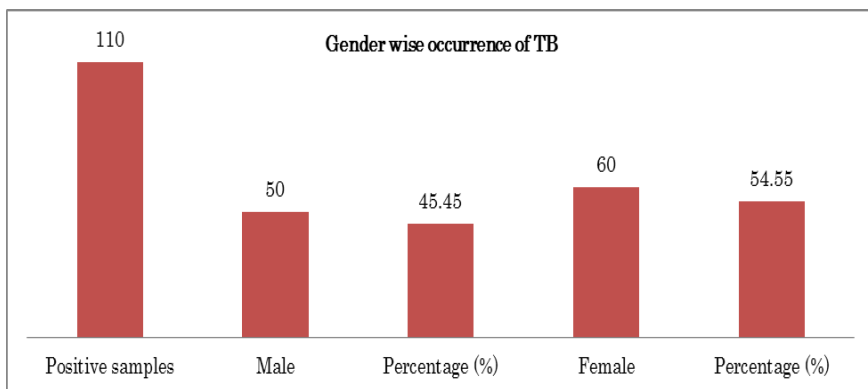


Figure 2: Gender wise occurrence of TB patients in Dir (L)

Age wise occurrence

Occurrence of TB among different age groups was also analyzed. Local population was divided into three different groups as follows group 1: 0-14 years, group 2: 15-64 and group 3: 65 and above (Figure 3). The maximum number of TB patients were in the age group 2 (15-64) years, followed by group 1 (0-14) years and group 3 (65 and above) years as shown in Figure 3. The age wise analysis of TB patients revealed

alarming results: 82% patients belong to age group 15-64 years, a result which is similar to others (Shafqat and Jamail 2012; Ahmad and Ali 2013; Muhammad et al. 2007; Dey 1995; Ahmad and Ali 2013). This age group is actually the most productive economically and therefore, significant. The females in this age group have close contact with children because they are involved in household activities, while the male members support the whole of the family. TB in this age group is not only the problem of the individual patient but TB is also the cause of poverty. TB in this age group (15-64) years is a serious threat for the whole family because this age group supports the whole family.

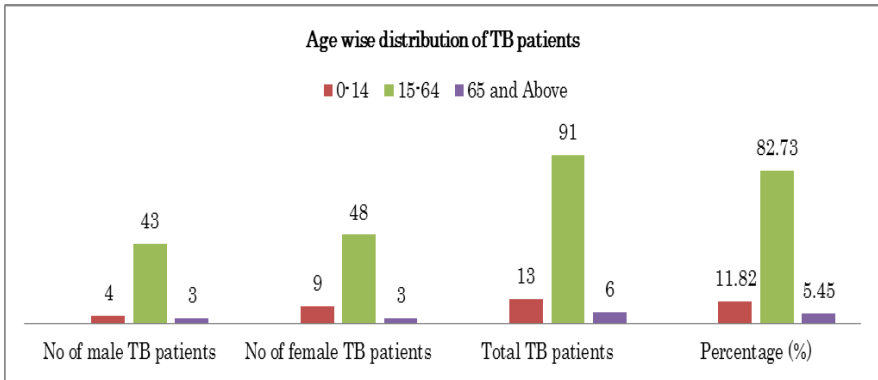


Table 3: Age wise distribution of male and female TB patients

Conclusions

It was concluded that TB is a prevailing disease in district Dir (L). In the present study it has been observed that TB has severely affected the adults and economically productive age group of district Dir (L). In this study it has been found that females are more susceptible to TB than males. Ignorance, no early medical care, poor hygiene, poorer nutritional status, war and economic depressions, lack of proper treatment protocol, lack of proper health facility and lack of knowledge regarding the treatment and precautionary measures of disease might be

putting at risk a large number of people who are living with TB patients.

Competing interests

The authors declare that they have no competing interests.

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