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Tuberculosis Is Still a Prevalent Disease in Population of District Dir (Lower) Khyber Pakhtunkhwa Pakistan

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Abstract: This study aims to find out the prevalence of Tuberculosis (TB) in population of District Dir Lower Khyber Pakhtunkhwa, Pakistan. This research work was done during the period 1st January 2012 to 30th March 2012. This research is based on the primary data source therefore, for the collection of data a standard and design performa was used include all the demographic information of the patients. A sample size of 340 TB patients was selected from five major healthcare centers District Head Quarter Hospital Timergara, Tehsil Head Quarter Hospital Samar Bagh, Rural Health Center (RHC) Lal Qilla, RHC Munda and RHC Shamshi Khan. The present study revealed that out of total 340 TB patients from five major healthcare centers 118 patients 34.71% were found positive with a ratio of 38.98% males and 62.02% females. The overall results demonstrate that the high number of cases 28 (23.7%) was found at age group 20-29 years while the minimum number of cases, 1 (0.8%) was recorded at age group 0-9 years. The area wise distribution of the TB patients shows that the high number of cases was found in Lal Qilla 25/46 (54.35%) while the minimum cases occurred in Samar Bagh 123/20 (16.26%). It is concluded that the TB is more common in female population. The awareness, early treatment and prevention of the disease are necessary.

Key words: Tuberculosis · Population · Healthcare Centers · Treatment

INTRODUCTION

Mycobacterium tuberculosis is an airborne bacteria causing tuberculosis (TB) which had primarily affects the lungs, although it may affects other organs and tissues. Almost 2.2 billion people or one third of the world's population are infected with TB. Most infected people have the tuberculosis germs in their bodies which are known as latent TB, but their immune systems protect them from becoming sick. However, over 9.2 million people have active TB disease, worldwide [1]. Tuberculosis has caused more deaths than any other infectious disease and cause about 95% of these deaths in the developing world [2]. It is the fourth major cause of death in Pakistan. The patients put their children and family members at risk of tuberculosis infection [3]. Tuberculosis is a leading cause of morbidity in Pakistan as about 1.5 million persons are suffering from active tuberculosis along with more than 0.2 million new cases are reported each year [4]. Pakistan Afghan refugees who live in poor hygienic conditions in camps play an important role in spreading of TB in native population, especially that the problem has been worsened in Khyber Pakhtunkhwa province of Pakistan [2].

MATERIALS AND METHODS

Aim of the current study was to find out the prevalence of TB in population of District Dir Lower Khyber Pakhtunkhwa Pakistan.

Area Selection: This study was conducted at District Dir (Lower) consists of Timergara, Samar Bagh, Lal Qilla, Munda and Shamshi Khan Towns.

Duration of Study: he present study was conducted during the period 1st January 2012 to 30th March 2012. The data were collected during the day time 9: 00 AM to 2: 00 PM.

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Table 1: Number of positive TB patients in different age wise groups at different areas of District Dir (Lower)

Age wise groups	Timergara	Samar Bagh	Lal Qilla	Munda	Shamshi Khan	Total (%)
0-9 (years)	1 (0.8%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (0.8%)
10-19 (years)	11 (9.3%)	0 (0.0%)	1 (0.8%)	2 (1.7%)	1 (0.8%)	15 (12.7%)
20-29 (years)	12 (10.2%)	6 (5.1%)	3 (2.5%)	4 (3.4%)	3 (2.5%)	28 (23.7%)
30-39 (years)	8 (6.8%)	3 (2.5%)	8 (6.8%)	2 (1.7%)	4 (3.4%)	25 (21.2%)
40-49 (years)	5 (4.2%)	3 (2.5%)	3 (2.5%)	4 (3.4%)	1 (0.8%)	16 (13.6%)
50-59 (years)	1 (0.8%)	4 (3.4%)	1 (0.8%)	2 (1.7%)	2 (1.7%)	10 (8.5%)
>60 (years)	3 (2.5%)	4 (3.4%)	9 (7.6%)	3 (2.5%)	4 (3.4%)	23 (19.5%)
Total (%)	41 (34.7%)	20 (16.9%)	25 (21.2%)	17 (14.4%)	15 (12.7%)	118 (100%)

Study Design: A descriptive epidemiological study was designed.

Data Collection: This study was based on the primary data source therefore, for the collection of data a standard and design performa was used include all the demographic details of the patients i.e Sex, Age, Area etc. The descriptive analysis of the data was done.

RESULTS

The ethical authority of the respective health care centers approved this study. A total 340 TB suspicious cases were studied wherein 118 (34.71%) were found positive by sputum smear microscopy.

Sex Wise Distribution of TB Patients: The present data were analyzed for the sex wise distribution showed that the high number of cases was recorded in female population of Dir (Lower) as compare to male population i.e. 2/118 (61.02%) and 46/118 (38.98%) respectively as shown in Figure 1.

Age Wise Distribution of TB Patients: The results demonstrate that the high number of cases 28 (23.7%) was recorded at age 20-29 years, followed by age 30-39 years 25 (21.2%), age >60 years 23 (19.5%), age 40-49 years 16 (13.6%), age 10-19 years 15 (12.7%), age 50-59 years 10 (8.5%) and age 0-9 years 1 (0.8%) as shown in Table 1 and Figure 2 and 3.

Occurrence of TB positive cases in different area of District Dir (Lower): Out of the total cases the highest number of TB patients were recorded at Lal Qilla followed by >Munda >Timergara >Shamshi Khan >Samer Bagh health care centers with percentage values 25/46 (54.35%), 17/40 (42.5%), 41/100 (41%), 15/40 (37.5%) and 20/123 (16.26%) respectively (Figure 4). The prevalence of TB patients was significantly higher at Timergara when it was compared with Munda and Shamshi Khan Centers.

DISCUSSIONS

The present study revealed that out of 340 TB patients from five major healthcare centers 118, (34.7%) were found positive. The result of our study is similar with the finding of other studies conducted on TB in Pakistan [5-9]. The results of our study is clearly indicate that the female are more infected by TB as compare to male population 72/118 (61.02%) and 46/118 (38.98%) respectively. Our result is similar with Ahmad [6] recorded that the TB is high in female population 53.22% of Dir (Lower). The results of the current study is also in line with others who recorded that the TB is high infected the female population as compare to male population [5-10]. The age wise distribution of TB positive cases shows that the age 20-29 years have high numbers of cases while the minimum number of cases 28 (23.7%) was recorded in age group 0-9 years.

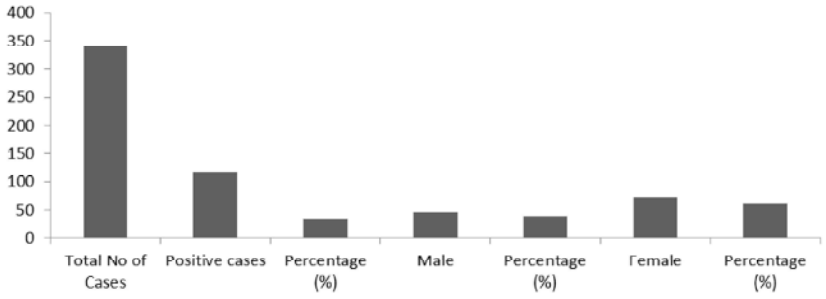

Fig. 1: Sex wise distribution of TB patients in Dir (Lower)

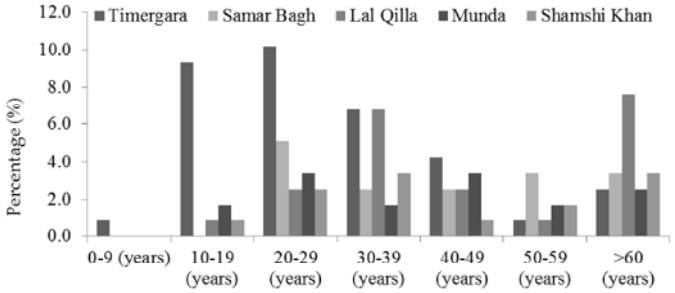

Fig. 2: Graphic presentation of percentage of positive cases in different age groups at different areas of District Dir (Lower)

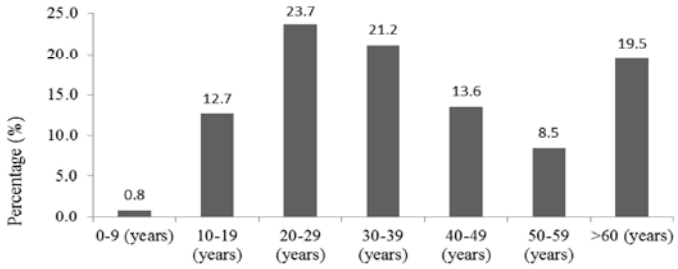

Fig. 3: Graphic presentation of percentage of total number of positive cases in different age groups in District Dir (Lower)

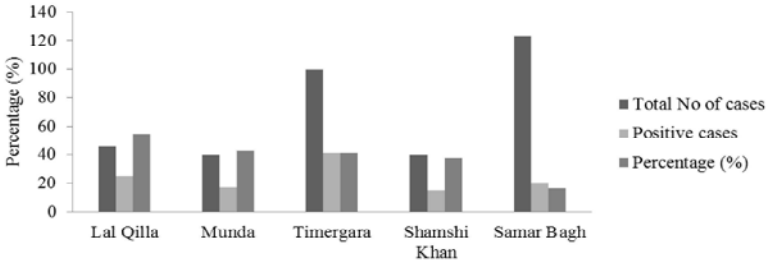

Fig. 4: Graphic presentation of percentage of total number of positive cases at different health care centers of District Dir (Lower)

According to Ahmad *et al*. [11] conducted a study on Dir (Lower) reported that the 23.33% of all cases were in age >20-30 years. When the present data were analyzed for the area wise distribution it has been found the maximum number of positive cases were reported in Lal Qilla 25/46 (54.35%), while the lowest cases were recorded in Samar Bagh 20/123 (16.26%). The numbers of TB cases were increased in Lal Qilla during the current study. Poverty, poor hygiene, overcrowding, ignorance, lack of proper diagnosis and treatment, war and economic depressions may put the population at high risk of TB [12-14].

CONCLUSIONS

This study shows that the TB is still a prevalent disease in population of District Dir (Lower). The female are more infected by TB as compare to Male. The high numbers of TB cases were recorded in Lal Qilla. For the control and prevention of the disease awareness, early treatment, case detection and health facility are very necessary.

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