World Journal of Environmental Biosciences
All Rights Reserved Euresian Publication © 2013 **eISSN 2277- 8047**
Available Online at: **www.environmentaljournals.org**
Volume 2, Issue 2: 78-81

Open Access **Short Communication**

Epidemiological Approach to Tuberculosis: Union Council Ouch

Tauseef Ahmad

Department of Micrbiology, Hazara, University, Mansehra, Khyber Pukhtoon Khwa, Pakistan,

Corresponding author: hamdardmicrobiologist@gmail.com

Abstracts:

The present study was conducted in the Union Council Ouch Tehsil Adenzai District Dir (Lower) Khyber Pukhtoon Khwa Pakistan. The aim of the current study was to determine the occurrence of tuberculosis among the suspected visited patients to health care center. This study was carried out during January 2011 to December 2011. A descriptive epidemiological study was design. The data were collected from the TB center Ouch. For the collection of data a questionnaire were used. The total 86 samples were collected. Out of the total the 45.35% cases were found positive with a ratio 64.1% are female and 35.9% were male. The high number 48.7% of TB patients were recorded in age group >55 years. From the present study it was concluded the TB is still prevalent in Union Council Ouch.

Keywords: Tuberculosis, Patients, health, survey

1.0 Introduction:

Tuberculosis (TB) remains a major public health problem worldwide especially in the developing countries. Among infectious diseases on the surface of the world the TB is a leading cause of morbidity and mortality (Siddiqui et al., 2011). Worldwide more than 2 billion peoples are infected with TB. In every second someone in the world is infect with TB. Tuberculosis is a contagious and airborne bacterial disease cause by *Mycobacterium tuberculosis (M. tuberculosis)*. The main site of infection is lungs (pulmonary TB) but can affect other sites as well (extra pulmonary TB) (Tiemersma et al., 2011). The common symptom of TB is coughing, chest pain, breathlessness and blood in sputum etc. The TB is transmitted by coughing, sneezing, speaking, close contact etc (Fine et al., 2001; CDC, 2007). The TB is a curable disease. In 1993, the World Health Organization (WHO) declares the TB is global emergency. In 1994, the WHO launched "Directly Observed Treatment Short-course" (DOTS) (CDC, 2007; WHO, 2008; WHO, 2009; WHO, 2011).

The TB is a disease of poverty affecting mostly young adults in their most productive years. Among infectious diseases the TB is the second leading cause of death worldwide. 95% of TB deaths are occurred in the developing world. In 2011, 9 million new cases of TB were reported among 1.4 TB deaths (WHO, 2011). In 2011, five countries with the largest number of incident of TB cases were recorded in India (2.0 million–2.5 million), China (0.9 million–1.1 million), South Africa (0.4 million–0.6million), Indonesia (0.4 million–0.5 million) and Pakistan (0.3 million–0.5 million) (WHO, 2012). In 2011, approximately 12 million prevalent cases of TB were reported (170 cases per 100 000 population). Pakistan is a leading country in the Eastern Mediterranean (EMRO) region where the 44% cases are found (Munch et al., 2003). The globally case detection rate is increased from 45% to 65% in 2003. The DOTS success rate is reached to 87% in 2009 (WHO, 2008; WHO, 2011).

The treatment success rate of TB in Pakistan was 90% in 2010. Of the 22 High Burden Countries (HBCs), the 14 counties reached or exceeded a treatment success rate of 85% among all new cases in 2010. Those countries which reported lower rates of treatment success were Thailand (83%), Nigeria (81%), Ethiopia (77%), Zimbabwe (76%), Brazil (72%), Uganda (68%), Russian Federation (66%) and South Africa (53%)(WHO, 2012).

2.0 Aim of the study

The aim of the present study was to find out the occurrence of TB among the visited population of Union Council Ouch to health care center.

3.0 Methods:

3.1 Study area: The present study was conducted in the Union Council Ouch Tehsil Adenzai District Dir (Lower) Khyber Pukhtoon Khwa Pakistan.

3.2 Study duration: This study was conducted during the period from January 2011 to December 2011.

3.3 Study design: A descriptive epidemiological study was design.

3.4 Data collection: The data were collected from the TB center ouch located in district Dir (Lower). For the collection of data a design standard questionnaire was used.

3.5 Data analysis: The data were analyzed for the gender wise distribution, age wise distribution and month wise distribution.

4.0 Results and Discussions:

During the period from January 2011 to December 2011 total 86 samples were collected. The diagnosis was done in the TB center Ouch. Of the total the 39 (45.35%) cases were found positive and 47 (54.65%) are negative (**see Figure: 1**).

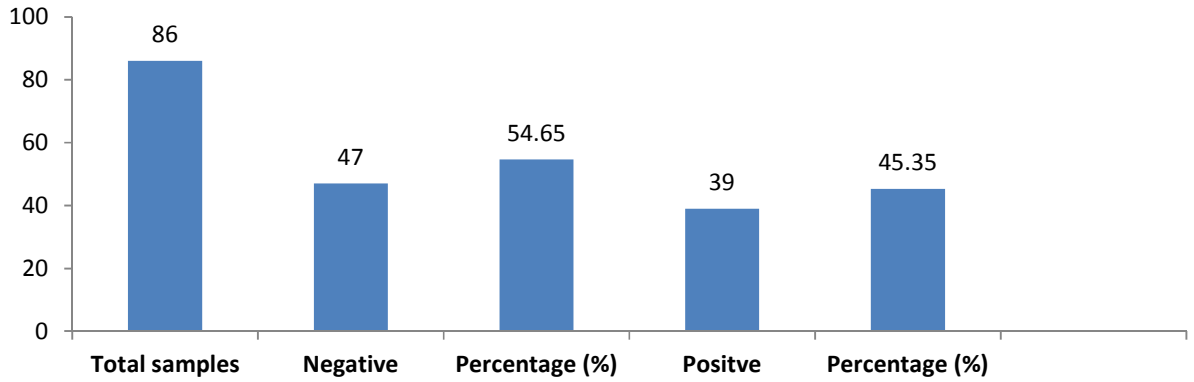

Figure 1: Distribution of TB negative and positive cases in Union Council Ouch

4.1 Gender wise distribution: The gender wise analysis of the data shows that the female population has high number of TB patients 25 (64.1%) as compare to male population 14 (35.9%) (**see Figure: 2**). The result of our study is similar with others (Tauseef and Naiz, 2013; Mhammad and Saba, 2012; Sultan et al., 2012).

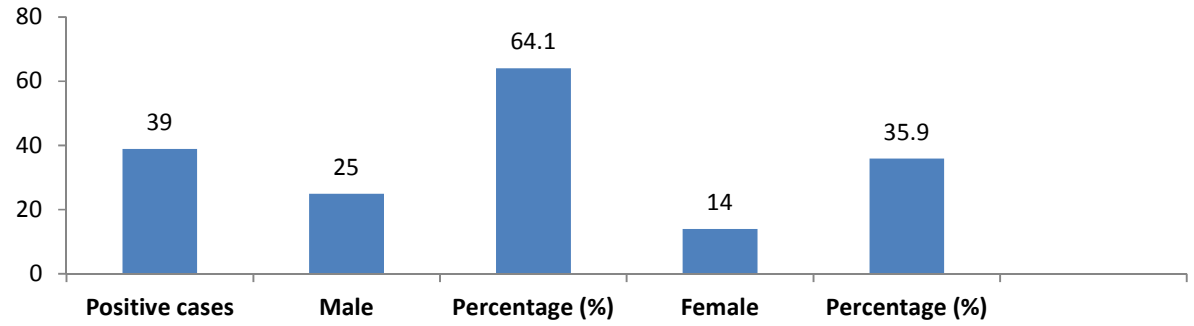

Figure 2: Gender wise distribution of TB patients in Union Council Ouch

4.2 Age wise distribution: For the age wise distribution the local population were divide in to three age groups, age group 1: 0-24 years, age group 2: 25-44 years and age group 3: 55 and above years. When the present data were analyzed for the age wise distribution it was found that TB affect age group 3; 19 (48.7%) followed by age group 2; 12 (30.8%) and age group1; 8 (20.5%) (**see Figure: 3**). The result of our study are similar with Tauseef et al, (2013) reported the 75% TB cases in age group between >60 years among the population of Chakdara Town.

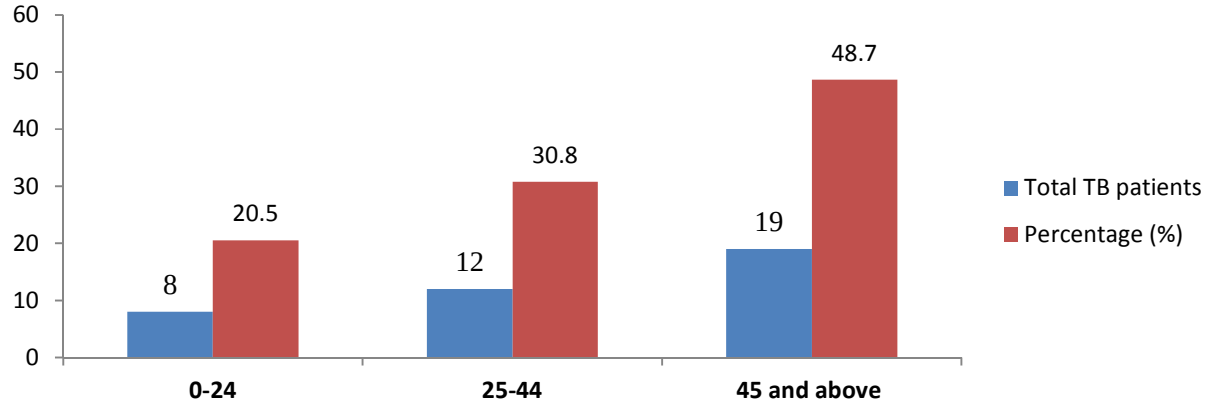

Figure 3: Age wise distribution of TB patients in Union Council Ouch

4.3 Month wise distribution: The month wise occurrence of TB cases was done. It was found that the maximum number of cases was recorded in month of May 5/7 (71.43%) followed by February 4/6 (66.67%), June 4/6 (66.67%), April 3/6 (50%), August 5/10 (50%), September 4/8 (50%), July 6/13 (46.15%), January 2/5 (40%), November 2/6 (33.33%), March 2/8 (25%), October 1/5 (20%) and December 1/6 (16.67%) (**see Figure: 4**).

The female have certain problem to visit the health care center. Lack of knowledge regarding the disease, ignorance, no early treatment, unavailability of diagnosis, left the treatment before the completion are the possible factors contributing the high number of TB cases in the said area.

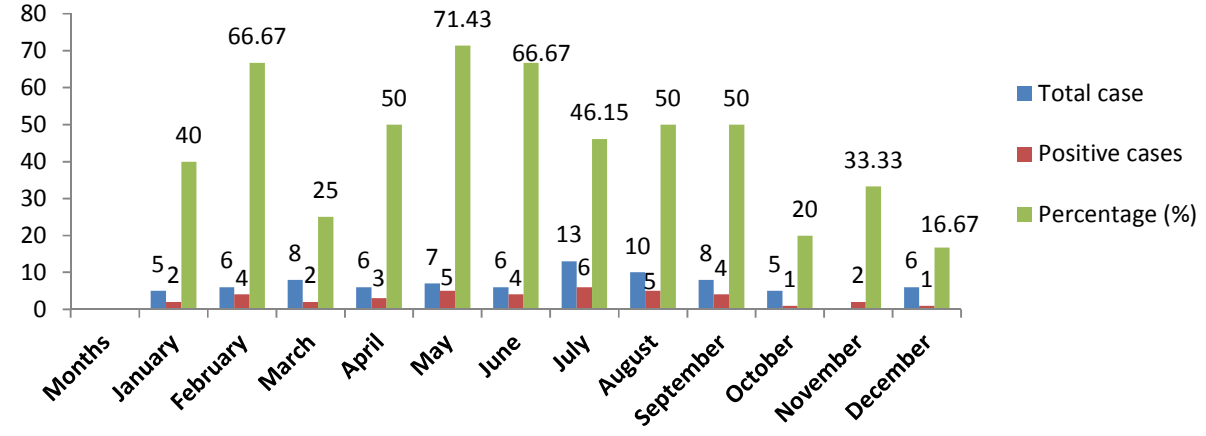

Figure 4: Month wise distribution of TB patients from January 2011 to December 2011 in Union Council Ouch

5.0 Conclusions:

From the current study it was concluded that the TB is prevalent in Union Council Ouch. The women with TB in the community show failure of the TB control because the women have closed contact with their children. The case detection rate of TB in the Union Council Ouch is very less. The government and local authority of the area need to give focus on TB case detection and treatment.

6.0 Acknowledgements:

The author is thankful to the staff of TB center Ouch for their co-operation in this study.

References:

1) Centers for Disease Control. (2007): Questions and Answers About TB, 2007. *CDC.* [Online]. Available: http://www.cdc.gov/tb/faqs/qa_introduction.htm#Intro1 [9 July 2008].
2) Fine, P., Floyd, S., Stanford, J., Nkhosa, P., Kasunga, A., Chaguluka, S., Warndorff, D., Jenkins, P., Yates, M. and Ponnighausj. (2001): Enviornmental mycobacteria in northern Malawi: implication for the epidemiology of tuberculosis and leprosy. *Epidemiol Infect.*126 (3), 379-387.
3) Muhammad, S. and Saba. J. (2012): The distribution of tuberculosis patients and associated Socio-economic risk factors for transmission of Tuberculosis disease in Faisalabad city. *Asain Journal of Natural and Applied Sciences.* Vol. 1, (1), ISSN: 2186-8476; P-ISSN: 2186-8468.
4) Munch Z., et al. (2003): Tuberculosis transmission patterns in a high-incidence area: a spatial analysis. *International Journal of Tuberculosis and Lung Disease.* Vol. 7, No. 3, pp. 271-277(7)
5) Siddiqui, M., Fakih, A., Burney, W., Iftikhar, R. and Khan, N. (2011): Environmental and host related Factors Predisposing to Tuberculosis in Karachi: A Cross-Sectional Study, *Journal of Pakistan Medical Students*. Vol. 1. No.1, pp. 13-18.ISSN: 2222-2332.
6) Sultan, A., Tahira, N., Sanuallah, K., Shahid, N. K., Liala, R. and Masood, A. (2012): Pulmonary Tuberculosis: Still Prevalent In Human in Peshawar, Khyber Pakhtunkhwa, Pakistan. *Pakistan Journal of Life and Social Sciences.* E-ISSN: 2221-7630, P-ISSN: 1727-4915.
7) Tauseef, A. and Naiz, A. (Sep, 2013): Tuberculosis is still prevalent in women of Gul Abad. *International Journal of Scientific Engineering and Research.* Vol, 1. Issue, 1.
8) Tauseef, A., Naseeruallah. and Kabir, A. (2013): A descriptive study of tuberculosis in Chakdara town Pakistan. *Asain Journal of Natural and Applied Sciences.* Vol. 1, (1), 98-103, ISSN: 2186-8476; P-ISSN: 2186-8468.
9) Tiemersma, E. W., et al. (2011): Natural history of tuberculosis: duration and fatality of untreated pulmonary tuberculosis in HIV-negative patients: A systematic review. *PLoS ONE.* 6(4): e17601.
10) World Health Organization. (2008): What is TB? How is it Spread? *WHO Geneva*. [Online]. Available: http://www.who.int/features/qa/08/en/index.html.
11) World Health Organization. (2009): Global tuberculosis control: surveillance, planning, financing. *WHO Geneva.*
12) World Health Organization. (2011): Global Tuberculosis Control. *WHO Geneva.* http://www.who.int/tb/publications/global_report/2011/gtbr11_full.pdf.
13) World Health Organization. (2012): Global tuberculosis Report 2012. *World Health Organization, Geneva, Switzerland.*