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Frequency Distribution and Treatment Outcomes of Suspected Tuberculosis Patients at Civil Hospital Barikot Swat, Pakistan

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ABSTRACT

Tuberculosis (TB) is one of the major public health problems all over the world especially in developing countries. The current study was design to assess the frequency distribution of suspected TB patients and find out the treatment success rate at Civil Hospital Barikot, Swat Pakistan. A retrospective study was conducted from 1st January 2014 to 31st December 2014. A total of 211 suspected TB patients comprised male to female ratio was (44.08%) and (55.92%) respectively were included in the study. Among the total registered patients (40.28%) were pulmonary tuberculosis positive (PTB +ve), (33.65%) were pulmonary tuberculosis negative (PTB -ve) and (26.07%) were extra-pulmonary tuberculosis (EPTB). In term of treatment outcomes, (21.33%) were cured and (76.78%) were treatment completed while all the registered cases were new cases. It was concluded that the treatment success rate was notified high (98.1%).

INTRODUCTION

Globally, Tuberculosis (TB) is one of the major public health problems especially for the low income counties. *Mycobacterium tuberculosis* is an acid fast rod shaped, causative agent of TB recognized worldwide as a major causes of morbidity and mortality among infectious diseases. Like others developing countries TB is also a major problem in Pakistan (Saeed *et al.*, 2012; Getahun *et al.*, 2013). Directly Observed Treatment Short-course (DOTS) is one of the most implemented and long running programs worldwide for TB control and prevention. WHO regularly evaluate the implementation of DOTS annual report since 1997 and these publications showed the performance, results of treatment TB cases demonstrated by National Programs (Elkomy *et al.*, 2013). In the year 2012 worldwide, 8.6 million new cases and 1.3 million death was recorded (WHO, 2013).

Pakistan was one of the top five countries in the world where TB cases (0.3 to 0.5) million were recorded. India (2 to 2.5), South Africa (0.4 to 0.6), China (0.9 to 1.1) and Indonesia (0.4 to 0.5) million cases were recorded respectively. According to WHO survey Incidence and Prevalence of TB in Pakistan were recorded about 230 to 310 per hundred thousand deaths occur in which 39 per hundred thousand due to TB infection (Saleem *et al.*, 2013). TB disease is treatable but the cost of treatment is very costly for poor countries. The disease and death ratio can be decreases if the cost of treatment and applying proper preventive measure were assure.

PATIENTS AND METHODS

The present was aimed to assess frequency distribution of suspected TB patients and find out the treatment success rate at Civil Hospital Barikot, Swat Pakistan. A retrospective study was conducted from 1st January 2014 to 31st December 2014 and the data were collected from the TB patients

register. The ethical permission was granted by the higher authority of the hospital.

RESULTS

In the current study a total of 211 (males n= 93 [44.08%], females n= 118 [55.92]) suspected TB patients were registered. Of the total registered patients 85 (40.28%) were PTB +ve (male n= 41 [19.43%], female n= 44 [20.85%]), PTB -ve were 71 (33.65%), (male n= 32 [15.17%], female n= 39 [18.48%]) and EPTB were 55 (26.07%), (male n= 20 [9.48%], female n= 35 [16.59%]) as described in table 1. In term of PTB +ve the high No. of cases were recorded in age 15-24 years 20 (9.48%) followed by 35-44 years 17 (8.06%), 25-34 years 13 (6.16%), 45-54 years (6.16%), 55-64 years (2.84%) and 0-14 years 3 (1.42%) as shown in detailed in table 1. On the basis of TB patients category all the cases 211 (100) were registered as new cases, while no case of relapse, failure, defaulter, transfer in and others were observed in the current study (Table 1).

Table 1: Socio demographic characteristics of registered TB patients at Civil Hospital Barikot (n=211).

Variables	Types of TB			Total No. of TB patients (%)
	PTB +ve (%)	PTB -ve (%)	EPTB (%)	
Sex				
Male	41 (19.43)	32 (15.17)	20 (9.48)	93 (44.08)
Female	44 (20.85)	39 (18.48)	35 (16.59)	118 (55.92)
Age groups				
0-14	3 (1.42)	9 (4.27)	7 (3.32)	19 (9)
15-24	20 (9.48)	16 (7.58)	12 (5.69)	48 (22.75)
25-34	13 (6.16)	13 (6.16)	15 (7.11)	41 (19.43)
35-44	17 (8.06)	7 (3.32)	6 (2.84)	30 (14.21)
45-54	13 (6.16)	10 (4.74)	9 (4.27)	32 (15.17)
55-64	6 (2.84)	4 (1.9)	3 (1.42)	13 (6.16)
≥65	13 (6.16)	12 (5.69)	3 (1.42)	28 (13.27)
TB patients category				
New	85 (40.28)	71 (33.65)	55 (26.07)	211 (100)
Relapse	-	-	-	-
Failure	-	-	-	-
Defaulter	-	-	-	-
Transfer in	-	-	-	-
Other	-	-	-	-

A brief summary of treatment outcomes of suspected TB patients was presented in Table 2. A total of 211 suspected TB patients were analyzed: 45

(21.33%) cured, 162 (76.78%) treatment completed, 1 (0.47) defaulter, 1 (0.47%) transfer out and 2 (0.95%) have no record of treatment.

Table 2: Treatment outcomes of the registered TB patients at Civil Hospital Barikot (n=211).

Category of TB patients	Cured (%)	Treatment completed (%)	Died (%)	Treatment after failure (%)	Defaulter (%)	Transfer out (%)	No record (%)
New	45 (21.33)	162 (76.78)	-	-	1 (0.47)	1 (0.47)	2 (0.95)
Relapse	-	-	-	-	-	-	-
Failure	-	-	-	-	-	-	-
Treatment after default	-	-	-	-	-	-	-
Transfer in	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-

DISCUSSIONS

In our study the prevalence of PTB +ve cases among the total registered suspected TB patients at Barikot was reported (40.28%). The prevalence rate of our study was lower from the finding of others studies (Ahmad and Jadoon, 2015; Ahmad *et al.*,2015).

On the basis of gender wise distribution of PTB +ve patients slightly high No. of cases was observed in female (20.85%), (19.43%) in male. The finding of our study was similar result with other studies (Ahmad and Jadoon, 2015; Ahmad *et al.*, 2014; Ahmad *et al.*, 2013; Ayaz *et al.*, 2012).

In the studied cases maximum No. of positive cases among PTB +ve patients was recorded in age 15-24 (9.48%), while low No. of cases was reported in age 0-14 years (1.42%). A study carried out by Ahmad and Jadoon (2015) reported high No. of cases (41.6%) in age 21-40 years. Getahun *et al.* (2013) reported 88.9% cases as new cases, while in our study all the cases were new cases. In our study the treatment success (cured and treatment completed) rate of TB was very high. Ahmad and Jadoon (2015) documented (99.17%) at Thana District Malakand Pakistan, Getahun *et al.* (2013) reported (82.7%) at Addis Ababa, Ethiopia, Dolly *et al.* (2015) recorded (61.3%) at Tertiary Hospital in South Eastern Nigeria, Ibne *et al.* (2012) reported (85.5%) at Teaching Hospital in Northeastern Nigeria.

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