

TREATMENT OUTCOMES OF SUSPECTED TUBERCULOSIS PATIENTS AT CIVIL HOSPITAL BARIKOT SWAT, PAKISTAN: (A CASESTUDY)

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ABSTRACT: Tuberculosis (TB) is one of the major public health problems all over the world, especially in developing countries. A retrospective study was designed to assess the frequency distribution of suspected TB patients and find out the treatment success rate at Civil Hospital Barikot, Swat Pakistan. 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 terms 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% in the study area.

Key words: Tuberculosis, Treatment outcomes, Retrospective study.

INTRODUCTION

Globally, Tuberculosis (TB) is one of the major public health problems, especially in lower income countries. *Mycobacterium tuberculosis* is an acid fast rod shaped, the causative agent of TB recognized worldwide as a major cause of morbidity and mortality among infectious diseases. Like others, developing countries TB is also a major problem in Pakistan [1-2]. Directly Observed Treatment Short-course (DOTS) is one of the most implemented and long running programs worldwide for TB control and prevention. World Health Organization (WHO) regularly evaluates the implementation of DOTS and report annually since 1997 and these publications showed the performance, results of TB treatment cases demonstrated by National Programs [3]. In the year 2012 worldwide, 8.6 million new cases and 1.3 million deaths were recorded [4].

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 estimates, the Incidence and Prevalence of TB in Pakistan were recorded about 230 to 310 per hundred thousand, respectively, while the deaths occur 39 per hundred thousand due to TB infection [5]. The disease and death ratio can be decreased if active case detection treatment and applying proper preventive measure were assure. For effective TB control program accurate data of incidence and prevalence are necessary. Therefore the current study was designed to provide baseline information of TB and the results of this study will be helpful for any future intervention in the study area.

PATIENTS AND METHODS

The present study 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 2011 to 31st December 2014 and the data were collected from the TB patients register. The demographic information of all the patients was

recorded, including date of entry, name of patients, gender, age, address etc. The ethical permission was granted by the higher authority of the hospital. The obtained data entered into Microsoft Excel 2007 and summarized using simple descriptive statistics such as frequency and percentage.

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 terms of PTB +ve the high number 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).

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.

DISCUSSION

In this study, the prevalence of PTB +ve cases among the total registered suspected TB patients at Barikot was reported (40.28%). Our finding is similar with Ahmad *et al.* [6] reported 40.08% prevalence of sputum smear positive cases at Dargai district Malakand Pakistan. On the other hand prevalence rate of our study was lower from the finding of others studies [7-8].

On the basis of gender wise distribution of PTB +ve patients slightly high number of cases was observed in female (20.85%), (19.43%) in males. The finding of our study was in

line with other studies who reported the highest number of cases in female patients rather than male [7, 9-11].

In the studied cases the maximum number of positive cases among PTB +ve patients aging between 15-24 (9.48%), while a low number of cases were reported in age 0-14 years (1.42%). A study carried out by Ahmad and Jadoon [7] reported the highest number of cases (41.6%) in age 21-40 years. Getahun *et al.* [2] 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 [7] documented

(99.17%) treatment success rate in Thana District Malakand Pakistan. Sunday *et al.* [12] reported overall treatment success rate was (87.5%) at Ogbomoso, Southwestern Nigeria. Ibne *et al.* [13] reported (85.5%) treatment success rate at a Teaching Hospital in Northeastern Nigeria. Getahun *et al.* [2] reported (82.7%) treatment success rate at Addis Ababa, Ethiopia. A study carried out by Dolly *et al.* [14] at Tertiary Hospital in South Eastern Nigeria recorded (61.3%) treatment success rate. It was concluded that the treatment success rate was notified high at Civil Hospital Barikot Swat.

Table 1: Socio demographic characteristics of registered TB patients at Civil Hospital Barikot, n (%)

Variables	Types of TB			
	PTB +ve	PTB -ve	EPTB	Total
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 (Years)				
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)
Category of TB patients				
New	85 (40.28)	71 (33.65)	55 (26.07)	211 (100)
Relapse	-	-	-	-
Failure	-	-	-	-
Defaulter	-	-	-	-
Transfer in	-	-	-	-
Other	-	-	-	-

PTB +ve: Pulmonary tuberculosis positive; PTB -ve: Pulmonary tuberculosis negative; EPTB: Extra pulmonary tuberculosis

Table 2: Treatment outcome of registered TB patients at Civil Hospital Barikot, n (%)

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	-	-	-	-	-	-	-

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