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Research Article

Reasons Behind the Repeated Defaulted From the Pulmonary Tuberculosis Treatment under Revised National Tuberculosis Control Programme

Nagaraja C. L, Malhotra B, Kajal N C, Swathi. K, Prabhudesai R, Gupta A
Chest and tuberculosis dept, Chest and TB Hospital, Amritsar, Punjab, India

***Corresponding author**
Nagaraja Raja
Email: naraju.doc@gmail.com

Abstract: The effectiveness of India's TB control programs depend critically on patient compliance and completion of full course of treatment. Discontinuing treatment prior to completion of treatment, can leave patients infectious for longer time, the emergence of multidrug resistance and consequently spread of infection. A case study was conducted in tertiary health center. Patients were interviewed by semi-structured questionnaire. The majority (63%) of responders were the age group of (21-40) years. Males (72%) and rural population (70%) constituted the majority of the interviewed patients. Most of the patients were defaulted in the continuation phase of treatment than the intensive phase of treatment. The majority of patients gave multiple reasons rather than single reason for stopping anti-tubercular treatment. Most common reason of stoppage of treatment was disappearance of symptoms 87(87%), followed by work related reasons 60(60%) and side effects of ATT 50(50%). Other important factors were lack of transportation 28(28%) and health facilities far away 23(23%). Some other reasons includes traditional methods/beliefs 16(16%), financial constraint 11(11%), functions (10%) and festivals (8%). Majority of risk factors for default were treatment and provider oriented and rectifiable with appropriate interventions, which would help in sustaining the good programme performance.
Keywords: Tuberculosis, Pulmonary, Control Programme

INTRODUCTION

If programme is implemented efficiently the success rate have shown to reach 90% thereby interrupting the chain of transmission in the community, saves many lives and reduce the economic burden as each untreated infectious tuberculosis patient can infect 10- 15 others in a year. A poorly managed tuberculosis control programme can worsen the epidemiological situation of tuberculosis in the community [1].

Sikkim, India has had a progressive increase and maintained the global targets of 85% cure of new smear positive patients and detection of at least 70% of the new smear positive cases since 2003 [2], indicating good programme performance. However, the treatment outcome of patients on retreatment has reported to be unchanged over the years. Treatment failure of the failure group has increased from 40.8% (2009) to 50% (2010). Similarly, treatment failure in default group has been reported to increase from 15.6% (2009) to 20.4% (2010) [3-4].

Patients who default treatment are at increased risk for the development of drug resistance, defaults from the treatment and relapse. Shorter interruptions of treatment are also a point of concern, as noncompliance with treatment may lead to persistence and resurgence of TB, prolonged infectiousness, and increased transmission rates [5].

RETREATMENT for tuberculosis has long been a neglected area in global TB control. Other components of the Stop TB Strategy have gained appropriate focus. But issues related to the treatment of patients treated previously for TB have remained under-examined and under-resourced [6].

According to the World Health Organization, multidrug-resistant tuberculosis (MDR-TB) has been reported to present in 3.7% of new TB cases and 20% of previously treated TB cases, with an estimated total of 630 000 cases worldwide [7, 8].

METHODS AND MATERIALS

The present study was carried out on 100 patients of tuberculosis categorized as treatment after default, who are attending the outpatient department and/or admitted in Chest & Tuberculosis hospital, Govt. Medical College, Amritsar, after taking their informed consent.

Inclusion criteria

- Sputum smear positive for acid fast bacilli by Z-N (Ziehl-Neelsen) Staining.

- Age >12 years
- Who had not taken anti-tuberculosis drugs for 2months or more than 2-months consecutively after starting treatment any time in the past.

Exclusion criteria

- Age<12 years
- Relapse patients
- Sputum negative for acid fast bacilli by Z-N staining.

100 patients, whose sputum positive for acid fast bacilli and had earlier defaulted on DOTS and now categorised as treatment after default and put on Category II DOTS was interviewed after taking their informed consent on the basis of a questionnaire. The questionnaire was first explained to the patient in their vernacular language and their responses were used to fill the questionnaire.

Each patient was interviewed individually in the absence of any third person to overcome the problem of biased responses. The interview was informed one, after taking their consent and strict confidentiality was maintained regarding their identity and responses.

RESULTS

Sputum positive pulmonary tuberculosis, who were previously defaulted from the treatment were included in our study. Present study was mainly constituted by male patients (72%), rural patients (70%), uneducated patients (48%) and economically unstable patients (59%).

The proportion of patient defaults from the treatment was not same, in all age groups. Among patients in the age group of 21-30 years the number of defaulters was 37% followed by 26% in the age group of 31-40years (Table 1).

63% of patients had addiction to alcohol/tobacco/drugs. Out these patients 63% were alcoholics, 32% had some forum of drug abuse, 24% had tobacco chewing and 22% were smokers. As shown in Table 2.

Majority of patients defaulted in the continuation phase (58%) than the intensive phase (42%) of treatment (Table 3). In intensive phase most of the patients defaulted in the 2nd month of the treatment. In continuation phase, most of the studied patients defaulted in the 4th month (43.2%) {end of 3rd month and beginning of 4th month}of course followed by 24.2% 5th month and 5.2% 6th month.

The majority of patients gave multiple reasons rather than single reason for stopping anti-tubercular treatment. Most common reason of stoppage of treatment was disappearance of symptoms 87(87%), followed by work related reasons 60(60%) and side effects of ATT 50(50%). Other important factors were lack of transportation 28(28%) and health facilities far away 23(23%). Some other reasons includes traditional methods/beliefs 16(16%), financial constraint 11(11%), functions and festivals (details given in Table 4).

Table 1: Age wise distribution of studied patients

Age in years	No. of patients	Percentage
<20	13	13%
21-30	37	37%
31-40	26	26%
41-50	14	14%
51-60	7	7%
>60	3	3%
Total	100	100

Table 2: Addictions in the studied patients

Addiction	No. of patients	Percentage
Smoking	22	22 %
Alcoholism	63	63 %
Drugs	32	32 %
Oral tobacco	24	24 %
No addiction	37	37%

Table 3: Time of defaults from treatment

	Time of Default	No of patient	Percentage
Intensive phase	2nd month	24	57.2%
Total 42 (42%)	3rd month	18	42.9%
Continuation phase	4th month	25	43.2%
Total 58 (58%)	5th month	14	24.2%
	6th month onwards	3	5.2%

Table 4: Reasons to stop anti-tubercular treatment

Reasons to stop ATT	No of patients	Percentage
Symptoms disappear	87	87%
Financial constraint	11	11%
Health facilities far away	23	23%
Work related	60	60%
Lack of Transportation	28	28%
Traditional method	16	16%
Side effects of ATT	50	50%
Weddings	9	9%
Functions	10	10%
Festivals	8	8%

DISCUSSION

Non-adherence to Anti-TB is the single most serious problem in the TB control programme. Health care providers and researchers have seen non-adherence as a part of patient's problem, ignoring the environmental, structural and operational factors [9].

In the present study most of male patients, reproductive age group patients and rural patients were default from the TB-treatment. It could be due to uneducated and low economic status of the patients. Similar findings have been reported by other studies such as Rodrigo *et al*. [10] and Hasker *et al*. [11].

Out of 100 patients 63 had some form of addiction, most common addiction was alcohol (63%) in our studied patients. Other common addictions in the studied patients were drug abuse (32%), tobacco chewing (24%) and smokers (22%).

Study of S. P Yadav *et al*. [12] showed that 82.2% were smokers, 64.6% were alcoholics and opium addiction was 23.1%. In a study by Muture *et al*. [13] 36.9% were alcoholic out 0f 120 patients and similar results were found in study done by Agarwala A *et al*. [14].

58% patients were defaults in the continuation phase of treatment, particularly at the end of 3rd month of treatment (43%). Sweta Gupta *et al*. [15] Seventy-two percent of patients had stopped treatment by the end of third month of treatment. Maximum interruptions were found to occur between second and third months.

Multiple reasons are given by a single patient to stop anti-tubercular treatment rather a single reason. In which the most common reasons were symptomatic improvement, work related and side effects of ATT. Other common reasons were as follows, lack of transportation, health facilities far away, traditional methods and financial constraints.

According to Verma AK *et al*. [16] majority of patients who interrupted the treatment [51 (89.5%)] attributed a "feel good sensation" as the prime cause. 45% patients lost faith in treatment; adverse effects were responsible in 31.6% cases; and 35.1% patients defaulted treatment because they were moving out of their place of domicile.

Study done by Mohanara *et al*. [17] showed that 25% of patients defaulted due to early relief of symptoms, 50% defaulted due to the side effects of the drugs. Kaona *et al*. [18] also found that 29.8% of TB patients failed to comply with ATT once they started feeling better.

Among important commitments weddings, functions and festivals were the commonest reasons to default from the treatment.

The role of certain socioeconomic and demographic factors such as, age, gender, social status, smoking status, alcohol consumption, annual income and education on the adherence to TB treatment has been studied in several reports[7]. In our study these factors do not show significant difference.

CONCLUSION

Majority of risk factors for default were treatment and provider oriented and rectifiable with appropriate interventions, which would help in sustaining the good programme performance.

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