Original Article

Magnitude of initial default in pulmonary tuberculosis

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Abstract

Objective: To assess the magnitude and reasons of initial default in pulmonary tuberculosis patients, diagnosed at Nazimabad Chest Clinic, Karachi.

Methods: This prospective study was conducted over five months from 1st December 2007 to 30th April 2008. Suspected tuberculosis patients were prescribed sputum AFB (Acid Fast Bacilli) smears for three samples. This study included the smear positive patients who did not collect their report and were therefore defaulters for initiation of anti-tuberculosis treatment. These patients were contacted on phone, reasons of defaults were enquired and they were offered free treatment.

Results: In the study period, out of 869 tuberculosis suspects, 224 were diagnosed as smear positive pulmonary tuberculosis. Of these 224, one hundred and sixty-two got themselves registered for treatment. The remaining 62/224 (27.67%) were initial defaulters. On telephonic contact, 55 (88.70%) were traceable while 07/62 (11.29%) were Untraceable-defaulters. Twenty-four patients (38.70%) reported to the clinic and were registered for treatment. The most common reason for default was 'dissatisfaction with services at the clinic'.

Conclusion: A high initial default for intiating Anti-Tuberculosis Therapy is a serious issue that needs to be addressed (JPMA 59:223; 2009).

Introduction

'Initial default'[1] is the term used to describe those tuberculosis patients who were diagnosed but did not initiate anti-tuberculosis treatment. In fact they did not collect their report from the laboratory. It has been observed that a significant number of tuberculosis patients default either before or after initiation of anti-tuberculosis therapy. Many studies have been conducted on default after initiation anti-tuberculosis treatment,[2,3] but few studies have focused on the issue of initial default. The issue of initial default is important because this would help in achieving the WHO target of 70% case detection rate. At present there is no reported data from Pakistan on this issue. We conducted this pilot study to determine the magnitude and the causes of initial default in our set up so that the strategies and measures can be taken to trace and register these defaulters.

Patients and Methods

This study was conducted at Nazimabad chest clinic (NCC), Karachi, one of the four filter clinics of Ojha Institute of Chest Diseases (OICD), a referral centre for tuberculosis patients. NCC is the pioneer in providing Directly Observed Treatment Short course (DOTS) in Pakistan since 1993. It registered 1600-1700 TB patients in the year 2007 and provides them treatment using DOTS strategy.

All tuberculosis suspect cases presenting to the clinic (NCC) were enrolled. Smear negative pulmonary tuberculosis cases were excluded while smear positive patients were registered. The study was conducted over five months from 1st December 2007 to 30th April 2008. All patients with respiratory symptoms reporting to the Medical Officer at the clinic, were asked for three samples of sputum for AFB (Acid Fast Bacilli). These patients had to report to the Medical Officer for further treatment. It was observed that some of the smear positive TB patients did not report/register for treatment. These were classed as defaulters and they were contacted on telephone and asked to come for treatment. Patients, who reported for treatment, were asked the reasons for initial default.

The study was approved by the Ethical review committee of OICD.

Results

A total of 869 tuberculosis suspects were evaluated during this period. Two hundred and twenty four were diagnosed as smear positive pulmonary tuberculosis. Out of 224 smear positive patients 162 were registered for DOTS. The remaining 62/224 (27.67%) were initial defaulters. Only fifty-five patients (88.70%) attended the telephone call. It was not possible to contact the remaining 07/62 (11.29%) (Untraceable-default). Twenty-four patients (38.70%) responded positively and reported to the clinic. They were then registered for DOTS. The most common reason for default was dissatisfaction of services provided at the clinic as expressed by 08 (33.33%) patients. Six (25%) patients were taking treatment from General Practitioners; five (20.83%) were of the opinion that

substandard drugs would be given at clinic, four (16.66%) were not aware of their disease and did not bother to collect the report while one (04.16%) patient said that he could not attend due to the long distance.

Discussion

To our knowledge, this is the first reported study on initial default among tuberculosis patients in Pakistan. Default in the treatment of tuberculosis is an important and vital issue. Initial default before initiation of treatment is a potentially serious problem, particularly in cases of smear positive patients. These patients are a potential source for infecting others in the community. A patient with active pulmonary tuberculosis expels infectious droplets of 0.5 to 5 microns during coughing, sneezing or speaking. A single sneeze can produce 40,000 droplets[4] and each of these droplets can infect the person who inhales it. Infectious dose of tuberculosis is very low as even a single bacterium can cause a new infection.[5] Besides it has been proven, that one smear positive patient infects 10-15 persons in a year and 10% of them will develop the disease in due course.[6]

High 'initial default rate' (27.67%) observed in this study is alarming, as these patients can transmit the disease in the community. In normal practice this transmission is stopped by starting and completing the effective anti-tuberculosis therapy. There is a need to trace and register these initial defaulters for treatment, to prevent further transmission.

Gopi[7] reported initial default rate of 14.9% in his patients diagnosed in a similar type of health facility. The reasons for default were personal problems like loss of wages, dissatisfaction with health services and disease related factors like feeling better or too ill.

Buu TN[1] reported an initial default rate of 8.3%, with 79.5% patients defaulting due to issues related to health facility in comparison to 58.32% of our patients. Fifteen percent of these patients were not aware of the diagnosis; which was also observed in our study. Thus there is a need to improve knowledge and awareness about tuberculosis and the clinic protocol among patients presenting to chest clinics. A most recent study from South Africa[8] reported initial default rate of 17%.

In our study, 11.29% patients could not be traced. Babu[9] reported a high rate (51%) of untraceable defaulters in his study. The issue of untraceable default needs urgent and foolproof actions by NTP (National Tuberculosis Programme) of the country. Documentation of accurate and full residential address and telephone numbers of the patient and the contact person are mandatory. There should be a system of default tracing in the TB control programme with allocation of reasonable funds for the purpose.

Proper counseling by laboratory technicians at the time of sputum sample collection can also be helpful. The technician should explain how sputum examination would help in the diagnosis and treatment of tuberculosis.

Twenty-five percent of our patients were taking treatment from General practitioners. This practice is acceptable if the treatment is compared. A mechanism should be developed by NTP (National Tuberculosis Program) for registration of cases who have taken treatment. Dewan[10] has proved that Public-private joint activities were associated with improved case notification, while maintaining acceptable treatment outcomes.

Conclusions

The high initial default especially among smear positive cases is a serious issue and magnitude of the problem can be confirmed by a large-scale study. Proper address documentation and default tracing is needed so the WHO target of case detection and treatment completion could be accomplished. All these measures will help to reduce the burden of tuberculosis.

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