



Revised National Tuberculosis Control Programme : A Two Year Follow Up Study

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ABSTRACT

Objective: To know the follow up status of tuberculosis patients after 2 years of completion of treatment in RNTCP. **Material & Methods:** Those patients of tuberculosis, who were registered between November 2002 to November 2003 were followed up after two years of completion of treatment between August 2006 and August 2007. Patients were followed with the help of health visitor. Patients were followed up clinically and symptomatic patients were also followed radiologically as well as bacteriologically. Results of the study were recorded in terms of number of patients remained asymptomatic, number of patients relapsed and number of patients died.

Results: Out of 208 patients registered during November 2002 to November 2003, 8 patients died during treatment period, 8 patients defaulted the treatment, the number of failures was 1 and 191 patients were declared cured/treatment completed. On follow up after 2 years, out of those 191 patients 43 were unavailable for interview due to various reasons. The study observed that out of a total of 148 patients interviewed, 127 patients (85.8%) were remained asymptomatic, 12 patients (8.1%) had relapsed and 9 patients (6.5%) died during follow up.

Conclusion: The study observed that majority of patients (85.8%) remained asymptomatic after the completion of treatment under DOTS

KEYWORDS

RNTCP India, Relapse, Follow up.

INTRODUCTION

Tuberculosis kills more adults in India than any other infectious disease. Almost two people die of it in our country, every three minutes¹. Unfortunately, despite the existence of the National Tuberculosis Control Programme from 1962 till 1992, the desired results have not been achieved. Revised National Tuberculosis Control Programme (RNTCP) came into existence by formulating and adopting the internationally recommended Directly Observed Treatment Short course(DOTS) strategy as the most systemic and cost effective approach to revitalize the TB control programme in India. To achieve the goal the first objective is to achieve and maintain – a cure rate of at least 85% among newly detected infectious (new sputum smear positive) cases and to achieve and maintain detection of at least 70% of such cases in the population. Treatment success rate has been increased from 25% to 86% from 1998 to 2004. Death rate has been brought down seven-folds, from 29% to 4%^{1,2}. Despite high cure rates, several queries and doubts have been raised by the clinicians either from government /private sector about the effectiveness of RNTCP regimens, inadequate diagnosis, method of administration, wrong categorization and increased rate of multi drug resistant tuberculosis. Despite 8 years of its existence, to the best of our knowledge, not a single study was done on follow up after one year of completion of treatment in all three categories simultaneously.

Till date very few follow up studies have been done to prove the efficacy of Revised National Tuberculosis Control Programme of India. The present study was done to know

the follow-up status of tuberculosis patients, treated under RNTCP of India after 2 years of completion of treatment.

MATERIAL AND METHODS

A total of 208 (Cat I: 96, Cat II: 53, Cat III: 59) patients registered between November 2002 to November 2003 were included in the study to be followed after 2 years of completion of treatment. Information about the name, age, sex, address, initial sputum smear result, during and at the end of their treatment, treatment category, date of start of treatment and outcome were collected from the Tuberculosis register (TB Register) maintained at the DOTS centre. All the patients along with their addresses were approached, door-to-door, at their homes with the help of health visitor. Written informed consent was taken from all the patients, found after respective follow up duration, in order to participate in the study. Patients were evaluated clinically in a pre-designed Performa. All the symptomatic patients were subjected to Chest x-ray PA view, sputum smear test for Acid Fast Bacilli on three occasions (early morning sample) and culture for Mycobacterium tuberculosis. Their detailed radiological evaluation was done by expert chest physician at our department.

RESULTS

During the period from November 2002 to November 2003, a total of 208 patients were registered in all categories (Cat I: 96, Cat II: 53, Cat III: 59). Of these 109 (52.4%) were males and 52(47.6%) patients were in 11-30 years age group and 99 (47.6%) were females, 75(75.6%) in 11-30 years age group (Table-1). Overall Treatment success

(cured/treatment completed) in study group were 91.7% (191/208) (Table - 2). Treatment success among Cat-I was 89.5 % (102/114), among Cat-II was 86.6 % (58/67) and among Cat-III was 92.9 % (52/56). (Table 2) Information was available for 148(71.1%) patients only whereas 28(13.5%) patients had migrated to some other place. 24(11.5%) patients could not be traced due to improper address over record register and 8 died during treatment. Status of total 148 patients revealed that 127(85.8%) patients had no complaints. , 9(6.5%) patients who took treatment died during study period, 3 patients died due to progression of tuberculosis, 3 died naturally, 2 died in accident and 1 died due to myocardial infarction. At the time of follow-up 12(8.1%) patients had relapsed, 6 in CAT-I, 5 in CAT- II and 1 in CAT-III (Table - 3).

DISCUSSION

Perhaps the greatest strength of the RNTCP is the new recording and reporting system, which enables periodic evaluation of the programme³. The cohort of patients diagnosed and put on treatment from November 2002 to November 2003 were followed up between August 2006 and August 2007 after lapse of varying periods of observation. Our study observed the relapse rate of 8.1% after 2 years of follow up while one study done in Mumbai, India and other in South Africa observed the relapse rate of 3.8% and 5% respectively^{2,3}. Our study showed a similar figure in comparison to controlled clinical trials in which patients were followed up regularly for 2 years or more have shown that the frequency of relapse is around 3–7% with standardized short-course chemotherapy⁵. Various studies, done to evaluate the efficacy of thrice weekly regimen of short course chemotherapy also revealed a relapse rate of 2-8% after 2 years of follow up⁶⁻¹². 85.8% of patients were asymptomatic in our study after 2 years, while in two studies done in South Africa and one study in India reported asymptomatic patients in 62%, 71% and 82.7% respectively²⁻⁴. Our study indicates a higher percentage of asymptomatic in comparison to above studies. This may be because the studies of South Africa were done using twice weekly regimen of directly observed therapy and Indian study also included the patients who had defaulted during the follow-up. 36.4% patients had migrated to other areas during 5 years, 16% patients had migrated during 1 year and 13.5% patients had migrated during 2 years in our study while in other study 43.3% had migrated¹⁶. The migration (temporary or permanent) was mainly because of, movement to native place or in search of employment. This is a typical demographic feature of metropolitan cities where people from neighboring districts / states come to seek employment¹³.

At last we can conclude that RNTCP of India is effective in treating tuberculosis patients and 85 - 90% of patients were asymptomatic after 2 years of complication of their treatment in different categories.

TABLE - 1

Distribution of patients age wise and sex wise

Age group (Years)	Male (n=109)		Female (n = 99)	
	No. of Patients	Percentage (%)	No. of Patients	Percentage (%)
0-10	03	02.75	04	4.04
11-20	27	24.77	39	39.39
21-30	25	22.94	36	36.36
31-40	26	23.85	10	10.10
41-50	13	11.93	08	08.08
51-60	07	06.42	01	01.01
61-70	06	05.50	00	00.00
71-80	02	01.83	01	01.01

TABLE - 2
Outcome of Patients after completion of DOTS (n = 208)

Outcome	No. of patients	Percentage (%)
Cured	120	57.69
T.C.	071	34.13
Defaulter	008	03.85
Failure	001	00.48
Dead	008	03.85
Total	208	100

TABLE: 3
Follow-up Status of Patients who were interviewed (n=148) at 2 years in terms of asymptomatic, relapse, died

Result	No. of Patients	Percentage (%)
Asymptomatic	127	85.81
Relapse	012	08.11
Died	009	06.52

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