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Original Research Article

Study of default in DOTS treatment in RNTCP unit at tertiary care centre

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Abstract: A retrospective investigation was carried out of records of 167 tuberculosis patients registered during 2012-13 for six month treatment schedule at DOTS unit of AIMS Indore. Of the 8 treatment default cases, half occurred during the first 2 months of intensive therapy phase. All defaults were seen in sputum smear negative cases. Defaulters were older in age and mostly from rural background. Implications of the findings for programme betterment and research are considered.
Keywords: Tuberculosis; DOTS; Treatment default; antitubercular therapy.

INTRODUCTION

Default in antitubercular chemotherapy is defined as interruption of treatment for two consecutive months, at least [1]. It is major impediment to tuberculosis control. Such patients suffer clinical deterioration and complications; relapse and treatment failures besides mortality [2, 3]. These cases remain infectious develop drug resistant infection which would spread in to the community [4]. Default or suboptimal adherence and treatment failure increase risk of acquired drug resistant tuberculosis.

Knowledge of factors promoting default in antitubercular chemotherapy is vital for improving TB care toward better outcome and control of disease spread. Presumably, such factors may differ as per the differing health care settings. It's made apparent that larger the treatment duration higher is risk of default and hence WHO revised the erstwhile 8 month chemotherapy to six month schedule [5].

Retrospection of epidemiological characteristic of TB patients under care of the RNTCP-DOTS unit of Aurovindo institute of medical sciences Indore between June 2012 to March 2013 is performed. Profiles of patients that defaulted the treatment were comparatively examined against profiles of compliant patients. Influence of demographic and disease characteristics on proportion of defaulters was preliminarily analysed.

PATIENTS AND METHOD

Retrospective study was carried out using routine recorded information of TB patients. Treatment default was defined as stated above. Older cases that received erstwhile 8 month chemotherapy regimen i.e., 2RHZE/6EH were excluded from the study. New cases put on six month chemotherapy schedule of 2RHZE/4RH were only included for analysis. In the community DOTS approach a family member or community health worker was assigned task of observing drug intake by patient.

Data are examined as frequencies and percentage for the demographic and clinical characteristics and the compliance/default as outcome. Treatment default yes/no was dichotomous outcome measure. Influential variables examined were gender, age and residence. Their association to outcome is examined.

OBSERVATIONS AND RESULT

Studied 167 registered cases included 144 cases of pulmonary and 23 of extra-pulmonary tuberculosis.37 cases were sputum smear positive for acid fast bacilli. There were 103 males and 64 females.116 cases had urban residence and rest 51were from suburbs and villages adjoining Indore. Majority 120 cases were under 40 year of age. In all 8(4.8%) treatment defaulters were identified.

It is evident that half the instances of default occurred during initial 2 months, constituting the intensive phase of chemotherapy.

Table 1: The instances of default occurred during six month regimen as under:

	Month Of Antitubercular Chemotherapy				
Number Of Defaulters	I	II	III	IV	V
	1	3	2	0	2

Table 2: Comparison of clinic-demographic profiles of defaulters versus compliant patients

Characteristics	COMPLIANT	DEFAULTERS
Number	159	8
Males/Females	98/61	5/3
Age In Years (Mean ± SD)	38.2 ± 14.8	44.2 ± 12.2
Urban/Suburban Or Rural	114/45	2/6
Pulmonary TB/Extra Pulm. TB	136/23	8/0
Smear Negative/Positive	122/37	8/0

The number of defaulters is too small to permit any valid comparison with the compliant contingent. However, certain observations are easy to make. Defaulters are older patients and largely village residents. Default exclusively occurred among smear negative pulmonary tuberculosis patients.

DISCUSSION

An early default in treatment must cause treatment failure and emergence of drug resistant TB. In an earlier systematic review, treatment default in low and middle income countries was stated as common mostly during the continuation phase and not initial intensive phase of chemotherapy [6-9]. That accompanies resolution of symptoms and perceived difficulties in obtaining care. In the present study, half the cases of default occurred during initial two months. Adverse reactions appeal to have played role in poorly educated patient. Lax persuation by the community DOTS supporters is particular basis for such default especially in rural and old people, who find it difficult to move for medical care as and when required. All treatment defaults occurred in smear negative patients. This compels to entertain possibility of misdiagnosis of tuberculosis which is likely with basic approach in practice. Rural background may associate relatively low socioeconomic profile impairing access to service, adding risk of treatment failure.

The study findings are relevant to improving effectiveness of DOTS programme. However, the retrospective information analysis of available ordinary records provides little scope to verify causal possibilities. No information is available on patient's income, occupational status, smoking, tobacco and alcohol habits, nutritional state, comorbidities and difficulties to access medical care. Findings suggest that interventions providing better or special care to older rural patients and greater vigilance and education of sputum smear negative cases should curtail treatment default in TB chemotherapy.

REFERENCES

1. World Health Organization. Definitions of tuberculosis cases and outcomes. Geneva, Switzerland WHO 2013.
2. Verver S, Warren RM, Beyers N, Richardson M, van der Spuy GD, Borgdorff MW, *et al.;* Rate of re-infection tuberculosis after successful treatment is higher than rate of new tuberculosis.Am J Respir Crit Care Med. 2005; 171(12):1430-1435.
3. O'Brien JK, Sandman LA, Kreiswirth BN, Rom WN, Schluger NW;DNA fingerprints from Mycobacterium tuberculosis isolates of patients confined for therapy noncompliance show frequent clustering.Chest. 1997; 112(2):387-392.
4. Weis SE, Slocum PC, Blais FX, King B, Nunn M, Matney GB, *et al.;* The effect of directly observed therapy on the rates of drug resistance and relapse in tuberculosis.N Engl J Med. 1994; 330(17):1179-1184.
5. World Health Organization. Treatment of tuberculosis guidelines, 4th edition.Geneva, Switzerland WHO 2010.
6. Tachfouti N, Slama K, Berraho M, Elfakir S, Benjelloun MC, El Rhazi K, *et al.;*Determinants of tuberculosis treatment default in Morocco: results from a national cohort study.Pan Afr Med J. 2013; 14:121.
7. Rutherford ME, Hill PC, Maharani W, Sampurno H, Ruslami R; Risk factors for treatment default among adult tuberculosis patients in Indonesia. Int J Tuberc Lung Dis. 2013; 17(10):1304-1309.
8. Jenkins HE, Ciobanu A, Plesca V, Crudu V, Galusca I, Soltan V, *et al.;*Risk factors and timing of default from treatment for non-multidrug-resistant tuberculosis in Moldova.Int J Tuberc Lung Dis. 2013; 17(3):373-380.
9. Kruk ME, Schwalbe NR, Aguiar CA; Timing of default from tuberculosis treatment: a systematic review.Trop Med Int Health. 2008; 13(5):703-712.