

Original article

Reasons for non-compliance among patients treated under Revised National Tuberculosis Control Programme (RNTCP) and their treatment outcome after structured counselling

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Abstract

Objective: To judge for reasons of interrupting the treatment as told by patient himself/herself and see for adherence to therapy and treatment outcome after counselling. **Methods:** All patients with history of interrupting the treatment presenting to chest OPD were included in this study. Counselling was done by medical officer on first interaction and by health care worker (as guidance of medical officer) subsequently. Reasons for interrupting the treatment were noted. Patients and their relatives were counselled about the urgent need for strict adherence to therapy with special focus on reasons for which that particular patient had defaulted. **Results:** Total 56 patients were included in the study during First Quarter of year 2007. Treatment outcomes of 40 patients were available. 6 out of them had interrupted the treatment (15%) (National figures: 19% and Maharashtra: 21%), 13 patients died during the treatment (5 of them were Cat 2 defaulters). Multiple reasons for interrupting the treatment were present. Most common reasons were alcoholism and feeling of relief with treatment (46.4%). **Conclusion:** There is an urgent need for stressing upon counselling during Revised National Tuberculosis Control Programme (RNTCP) sensitization and training. Medical officers can play an important role in reducing the defaulter rate by counselling of patient and their relatives.

Keywords: Defaulter; RNTCP; Treatment interruption; Counselling

INTRODUCTION

Tuberculosis (TB) is a medical, social, and economic disaster of immense magnitude that is occurring the world over^[1,2]. Nonadherence to prescribed treatment is often underestimated by the physician

and is difficult to predict. In the West, demographic factors such as age, sex, marital status, education level, and socioeconomic status have not been found to correlate with the degree of treatment adherence. On the other hand, certain factors such as psychiatric illness, alcoholism, drug addiction, and homelessness do predict nonadherence to treatment^[3]. The directly observed treatment, short-course (DOTS) strategy, which has been endorsed by the WHO as the only effective way to control TB, has to some extent addressed these problems^[4-6]. Incomplete and inadequate treatment is the most important

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factor leading to development of multi drug resistant (MDR) TB, suggesting that it is often a man made tragedy^[7]. In spite of all above measures, defaulter rates are very high-adding to increased morbidity, new cases and more number of MDR tubercular cases. Average defaulter rate in new smear positive cases in Maharashtra in year 2006 was 5.2 % ; 8.2 % in smear negative cases and 6.4 % in extrapulmonary cases. Defaulter rates in Smear Positive Retreatment Cases for India 2006 (excluding "Others") was 19.3 % and 21.3 % for Maharashtra as TBC India 2008 Annual Status Report. In this study, we tried to analyse different reasons for treatment interruption in indoor admitted patients suffering from tuberculosis and treatment outcome was noted in same patients after structured counselling.

MATERIALS AND METHODS

This hospital based study was conducted at a 909 bedded tertiary care teaching hospital of Datta Meghe Institute of Medical Sciences University, Wardha, India [National Assessment and Accreditation Council (NAAC) Accredited Grade A], between 1st January 2007 and 30th April 2007. Follow up was done till 3 months after completion of treatment (Last case till March 2008). This study was conducted with approval from the Institutional Ethical Committee (IEC). The hospital provides health care to the nearby area, mainly from the rural area of Wardha district and other parts of Central India. This hospital has a DOTS center and designated microscopy center which is implementing quality assurance protocol and providing quality assured laboratory services under the dept of chest and tuberculosis and the program is run as the guidelines of Revised National Tuberculosis Control Programme (RNTCP). All patients admitted in chest ward, having history of treatment interruption and registered under RNTCP (already taking DOTS) were included in the study after taking the written consent. Known MDR cases were excluded from the study group. Reasons for interrupting treatment were noted. Patients were educated regarding their disease and Counselling for ill effects of treatment interruption. Counselling was done initially by Senior Consultant (in front of

Health care worker). Subsequent counselling was done by same health care worker (first two counselling under supervision of Senior Consultant). Average counselling time per patient was around 30 mins. Besides explaining ill effects of treatment interruption and following aspects were addressed: socio economical aspect, adverse effects of anti-tuberculosis drugs, alcohol dependency (If present), immuno-compromised status (If present). Initial counselling was done alone. Subsequent counselling (during ward stay) was done in presence of first degree relative/care taker of patient. It also included following objectives during counselling session: First visit, empathetic approach towards patient and family (keeping in mind the severity of illness), and prime responsibility lies on Doctor / Health care worker monitoring the patient; Subsequent visit (after discharge), firm approach towards patient and family (In case patient interrupts treatment again without genuine reason example; feeling better) and prime responsibility lies on patient and his family.

RESULTS

Total patients enrolled were 56 including 48 males and 8 females. Average age was (42 ± 13) yrs. In our study common reasons for treatment interruption were alcohol dependence (26 %) and feeling better with treatment (26 %) (Figure 1). Treatment outcome of 40 patients were available. Average period of regular intake was (3.0 ± 1.5) months. 6 had total treatment interruption after counselling (15 %) with sputum positive and on Ca 2 treatment after counselling. Total number of deaths in treatment interrupted patients were 13 (32.5 %). 11 (85 %) out of 13 death were in sputum positive patients and 12 (92 %) out of these 13 death were presently on Cat2 treatment, which suggests that these might severely ill or resistant to treatment. 5 (38 %) out of 13 deaths were on Cat2 treatment before enrolment in study and all were sputum positive. Culture proven MDR was diagnosed in 5 patients and 1 of which defaulted the treatment, 2 died and 2 were started on Cat4 treatment under RNTCP. 3 patients were found co-infected with HIV (Figure 2).

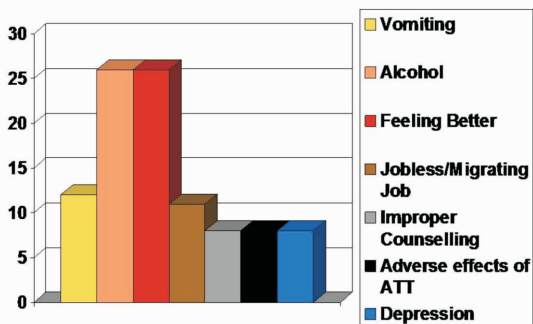


Figure 1 Reasons for treatment interruption.

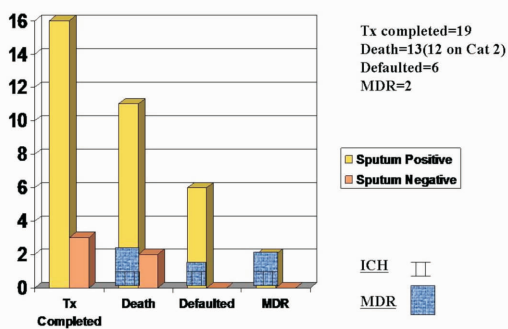


Figure 2 Treatment outcome of patients interrupting treatment (After counselling).

DISCUSSION

In India, innovative measures such as public-private mix and the use of Anganwadi workers, patient-provider communication and counselling to help ensure patient compliance with the treatment regimen, to enhance the reputation of a patient-friendly service, and to encourage patients and their families to become advocates. Advocacy, Communication and Social Mobilisation (ACSM) has been tried out under program conditions to improve treatment adherence in patients with TB. According to International Care of Tuberculosis, any practitioner treating a tuberculosis patient holds important public health responsibility. To fulfil this responsibility the practitioner must not only prescribe an appropriate regimen but

also be capable of assessing the adherence of the patient to the regimen and addressing poor adherence when it occurs. By doing so, the provider will be able to ensure adherence to the regimen until the treatment is completed (Standard 7). To foster and assess adherence, a patient-centred approach to administration of drug treatment, based on the patient's needs and mutual respect between the patient and the provider, should be developed for all patients. Supervision and support should be gender-sensitive and age-specific and should draw on the full range of recommended interventions and available support services, including patient counselling and education. A central element of the patient-centred strategy is the use of measures to assess and promote adherence to the treatment regimen and to address poor adherence when it occurs. These measures should be tailored to the individual patient's circumstances and be mutually acceptable to the patient and the provider. Such measures may include direct observation of medication ingestion (directly observed therapy; DOT) by a treatment supporter who is acceptable and accountable to the patient and to the health system (Standard 9). The reader can find more details on this topic at the Web site <http://www.tbcindia.org>. A study done of 186 defaulters during 3rd and 4th quarters of 1999 and 2001 in one Tuberculosis Unit (TU) of Tiruvallur district, Tamil Nadu showed 25 (13%) death after defaulting. Risk factors for default were alcoholism, category of treatment, smear status, type of disease and inconvenience for DOT^[8]. From September 1988 to February 1989, 52 compliant and 50 noncompliant tuberculosis outpatients who were prescribed antituberculosis drug regimens were interviewed in Wardha District, India by F Barnhoorn, H Adriaanse. Compliers reported more physical symptoms at the onset of the disease, whereas more noncompliers mentioned a deteriorated health condition at the time of interviewing. Low associations were found between demographic and socioeconomic variables and adherence. The relationship between presence of social support and cooperation with the treatment procedure was confirmed. Satisfaction with the health care provider contributed positively to the continuation of drug intake. The toxicity of drugs was the major reason for



defaulting for treatment^[9]. The study done in Anand, Gujarat, revealed that the compliance of DOT was significantly high among those who have good knowledge about various aspects of disease^[10]. In our study alcohol dependence and feeling better with treatment constitutes 52 % of total reasons. If judging for easily avoidable reasons for defaulter, then feeling better with treatment (26 %) and vomiting due to gastritis (13 %) constitutes a major group (39 %) which can be taken care of with proper counselling (Figure 1). In our study treatment interruption rate after counselling was 15 %. All of these cases were from sputum positive group. It is less than national figure of 19 % and Maharashtra figure of 21 % of Smear positive Treatment after default (TBC Annual Report – 2008 for First Quarter 2007). Death in treatment interrupted patients was 32.5 %. Out of this death in treatment interruption group 39 % cases were defaulter. The high rate of death (National figures – 8.5 % and Maharashtra – 10 % of smear positive treatment after default, TBC Annual Report 2008 for First Quarter 2007) was due to the fact that most of patients having death were presented with severe disease as our centre is a tertiary referral centre. Reduced defaulter rates after counselling in treatment interrupted patients inspite of having severe disease (Increased severity is associated with greater defaulter rates) presenting to tertiary referral hospital suggests that counselling done properly has a greater impact on reducing defaulter rates, in turn reducing morbidity, mortality, preventing new cases and MDR cases. Treatment interruption rates can be reduced by re-counselling at the end of intensive phase or beginning of continuation phase (Average period of regular intake was 3 – 4 months) especially regarding prevention of vomiting and to continue medicines even if patient is feeling normalcy. Monitoring parameters at district level should include defaulter's rates and reasons for non-compliance and death rate in treatment interrupted group. Same should be available on website of state. Present feedback forms send to Referral centre include only assignment of tubercular number to the

transfer in patient but not the outcome of patient in form of Cure, Default or Death at the end of treatment. Feedback forms should include the outcome of patient and compliance of patient to anti-tubercular therapy.

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