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TREATMENT COMPLIANCE OF PATIENTS ON DOTS UNDER RNTCP IN DISTRICT PULWAMA (KASHMIR), WITH SPECIAL REFRENCE TO DEFAULTERS

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ABSTRACT: Defaulters from tuberculosis treatment are at risk for clinical deterioration and complications including MDR, XDR and death. The objectives of the study were to identify various risk factors associated with Tuberculosis default patients& to assess the timing & pattern of treatment interruption. For this cross sectional study eligible patients for the study included TB patients (New cases or defaulters), Patients were identified from the TCU registers and Contacted to answer a questionnaire. For each case two defaulters were also interviewed on already formulated; pretested questionnaire in their respective homes. Relevant DOTS providers were also interviewed. Four TB default patients were found registered during study period of one year in district Pulwama & eight non-defaulters (Treatment completed/cured). Major reasons for default included side effects of anti TB drugs, patients put on non-DOTS & patients beginning to feel better/cured. The high prevalence of TB default patients mandates interventions in the form of introducing Non-DOTS under RNTCP, improving health education regarding benefits of treatment completion by DOTS staff.

KEYWORDS: Tuberculosis; Treatment Default; Cure Rate.

INTRODUCTION: Tuberculosis (TB) is a specific infectious disease caused by Mycobacterium tuberculosis. The disease primarily affects lungs and causes Pulmonary TB (PTB). The disease is usually chronic with cardinal features like persistent cough with or without expectoration, intermittent fever, loss of appetite, weight loss, chest pain and haemoptysis.[1] Tuberculosis has existed in India since the earliest days. In 1500 BC, the Rigveda described the illness as Rajayaksma, "King of Diseases".[2] Phthisis is a Greek term for tuberculosis, around 460 BC, Hippocrates identified phthisis as the most widespread disease of the times involving coughing up blood and fever, which was almost always fatal.[3] TB is also called Koch's disease, after the scientist Koch. The bacillus causing TB, Mycobacterium tuberculosis, was identified and described on 24 March 1882 by Robert Koch.[4] TB affects more Men than women and mostly adults in their productive years[5.] India is the highest TB burden country.[6] Nearly one third of world's population is infected with tuberculosis bacilli.

WHO statistics for 2012 giving an estimated incidence fig of 2.3million cases of TB for India out of global incidence of 8.6 million cases. The estimated TB prevalence fig for 2012 is given as 2.8 million. The treatment outcome "default" under RNTCP is patient who has not taken anti-TB drugs for two months or more consecutively after starting treatment[.7]. These patients are at risk of developing multidrug resistant tuberculosis (MDR-TB)[8] Tuberculosis is an infectious disease and an untreated or incompletely treated person can spread the disease in the community. This is one of the reasons why we are not able to eradicate TB from the community.

Defaulters are important cause of MDR TB and XDR TB which are difficult to treat and patients with MDR TB and XDR TB have a high mortality rate. This study aims to find out reasons for

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default from the treatment and to recommend measures to improve the services under RNTCP to ensure compliance to DOTS by every single case of TB. With this background our study was conducted with objectives to understand socio-clinical and demographic characteristics of patients who defaulted from RNTCP treatment regimens, to assess the pattern and timing of treatment interruptions & to Study the various risk factors for patients who defaulted.

METHODOLOGY: For this cross sectional study, treatment records were obtained from RNTCP programme manager (STO Kashmir) for 2013 defaulters (2nd, 3rd and 4th quarter) and defaulters for 1st quarter of 2014 of district pulwama. Eligible patients for the study included TB patients (New cases or defaulters) who were enrolled in treatment for TB between 1 April 2013 to 31 marches 2014. Patients were identified from the TCU registers and contacted to answer a questionnaire. Participants were male or female, aged 15 years or older, diagnosed with active TB (Defined according to RNTCP) and had started TB treatment according to RNTCP guidelines. In total, 4 TB treatment defaulters and 8 non defaulters were selected for the study. Patients who refused to take part in the study were excluded.

A defaulter (Case) is defined as a TB patient who interrupted treatment for two months or longer consecutively after initiation of treatment. A non-defaulter is defined as TB patient diagnosed in the same time period, from the same TCUs, following the same treatment protocol, but who completed the whole treatment regimen. A total of 12 patients (4 defaulters and 8 non-defaulters) were taken up for study. Each patient was interviewed on already formulated; pretested questionnaire in their respective homes. Relevant DOTS providers were also interviewed. Under RNTCP, District Pulwama & District Shopian is labeled as single district i.e., District Pulwama. The study was done for a period of one year. Ethical clearance has been sought from hospital ethics committee. Besides this written consent was taken from patients participating in the study & confidentiality was maintained.

Data was collected through patient interviews using questionnaires, review of TB registers and treatment cards. Enrolled patients were interviewed. Interviews were conducted in local language.

RESULTS: A total of twelve patients were interviewed which included four default patients & eight treatment completed/cured patients. 25% of the patients belonged to the age bracket of 16 to 21 years, 25% patients between age group of 45 to 55 years, 25% of patients between age group of 56 to 64 years & 25% between age group of 65to75 years. 75% of default patients belonged to age bracket of 5o to 65 years.

75% of the default patients were males & 25% of the patients were females. In our study 25% patients were illiterate. Poor knowledge about tuberculosis was seen in 41.67% 0f patients. Among defaulters, 50% Of patients defaulted due to side effects to anti TB drugs (They were shifted to Non DOTS by private practioner & SKIMS Srinagar), 25% patients had defaulted because they had been put on non-DOTS by SKIMS Srinagar (These patients did not report with any side effects to Anti-TB drugs) & 25% patients defaulted because they were feeling better(cured). Poor knowledge about Tuberculosis& lack of knowledge regarding benefits of treatment completion was associated with 50% TB default patients compared to non-defaulters (Treatment completed/cured) patients of TB. The default rate was higher in male sex (75%) as compared to females (25%).

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DISCUSSION: Risk factors among default patients included side effects to anti TB drugs in 50% of Patients (they were shifted to Non DOTS by private practioner & SKIMS Srinagar), 25% patients were put on non-DOTS by SKIMS Srinagar (These patients did not report with any side effects to Anti-TB drugs) & 25% patients defaulted because they were feeling better (Cured). Poor knowledge about Tuberculosis & lack of knowledge regarding benefits of treatment completion was associated with TB default patients compared to non-defaulters (Treatment completed/cured) patients of TB. This was seen in accordance to study done by Vijay S et al 2003[9] where one of the risk factors included inadequate knowledge about Tuberculosis. This default rate was found in accordance with a study conducted by R K. Jaggarajamma et al (2007)[10] from Tamil Nadu which concluded reasons for default given by the patients were: drug related problems like nausea, vomiting, giddiness (42%) & treatment from other private or public health facility(13%).

The default rate due to side effects of anti TB drugs was lower in study done by Kaona Frederick AD et al (2007)[11] a cross sectional study in Zambia concluded 20% patients defaulted because of TB drugs being too strong. similarly default rate due to side effects of anti TB drugs was lower compared to our study in a study done by Chatterjee P et al (2002)[12] where 9% of patients defaulted due to intolerance to drugs. In our study the default rate since patients was feeling better (cured) was 25%, this default rate was in correspondence to a study done by RK Jaggarajamma et al (2007)[10] where default rate because patient was feeling better (Cured) was 20%. However higher default rates due to patient beginning to feel better were reported by Kaona Frederick AD et al (2007).[11] Similarly higher default rates due to feeling of improvement were reported by Demissie M and Kebede D (1994)[13] at Addis Abeda Ethopia & K Salma et al(2013).[14] In our study the default rate was higher in male sex (75%) which was in accordance to study done by Demissie M and Kebede D (1994)[13] at Addis Abeda Ethopia, however this rate was in contrast to a study done by Ugra Mohan Jha etal (2o10) [15] in which default was weakly associated with male sex.

LIMITATIONS: There were several limitations in this study. Since this study was conducted in one district of Kashmir valley, it may not be representative of general population.

CONCLUSION: The high prevalence of TB default patients mandates interventions in the form of introducing Non-DOTS under RNTCP and better health education & awareness by DOTS staff regarding importance of treatment completion.

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	Number	%
Age (in years)		
16-21	3	25
45-55	3	25
56-64	3	25
65-75	3	25
Education		
Illiterate	3	25
Primary level	6	50
Secondary level	2	16.66
Higher secondary and above	1	8.33
Occupation		
Employed	9	75
Unemployed	3	25
Sex		
Males	9	75
Females	3	25
Table 1: Socio-demographic profile of the study population (n=12)		

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Knowledge about TB	Number	Percentage
Poor	5	41.66
Good	7	58.33
Table 2: Knowledge about Tuberculosis in study population (n=12)		

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