Study of Demographic Status of Tuberculosis Patient

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Abstract:

Background*: Tuberculosis (TB) is one of the most globally serious public health problem. Poverty illiteracy and poor socio-ecomonic status are key factors for tuberculosis disease. Literacy can play an important role in developing understanding about TB & to perform activities with regard to prevention*.

Aim and objective: *To assess the demographic status of Tuberculosis patients.*

Methods*: 76 patients which were registered under RNTCP DOTS category 1st ,2nd ,3rd were taken in the study. The knowledge in the interviewed patient about annual income, occupation, literacy and smoking habit were assessed through a questionnaire during April 2005 to September 2006 in Department of tuberculosis and Chest disease ,RNT Medical College, Udaipur Rajasthan.*

Results: *Out of 76 tuberculosis patients 44 % were in category 1st, 23.6 % were in category 2nd and 31 % were found in category 3rd . 71.05% were within the age group of 20-50 years. About 71% were male and 29% were females. 81.5 % belong to the Annual Income group of less than Rs. 30000, 42.1 % belong to income group below Rs. 15000. 53.9% patients were illiterate and 46.05 % patients were literate. 38 % patients were labour by occupation. 76 % TB patients were smokers and 23 % were non smokers (p value is 0.4)*

Conclusion: *Increased prevalence of tuberculosis in lower socio-economic status. There is a need to implement targeted interventions to educate masses for better TB control.*

keywords: *illiterate, Mycobacterium Tuberculosis , occupation poverty, socio-economic status ,Tuberculosis*

I. Introduction

Tuberculosis is a disease caused by Mycobacterium tuberculosis. It was first isolated by Robert Koch in 1882 (1). Nearly one-third of the global population is infected with Mycobacterium tuberculosis (2). New infections occur in about 1% of the population each year (3). In 2007, an estimated 13.7 million chronic cases were active globally (4), while in 2013, an estimated 9 million new cases occurred (5). In 2013 there was between 1.3 and 1.5 million associated deaths (6), most of which occurred in developing countries (7). In India more than 1.8 million new cases appear every year. Approximately 4,00,000 people die from TB every year in India, more than 1,000 every day (8). The problem is aggravated by increasing population density, poverty and illiteracy (9). There is a relevance of gender issues in prevalence and treatment of TB in developing countries (10). Evidence from various researches strongly suggests that there is a close link between TB and poverty(11 - 14) . It has been shown that anti-TB treatments when given under direct observation gives a cure rate as high as 95 % (15,16) and the World Health Organization (WHO) recommends control programs to use Directly Observed Treatment, Short Course (DOTs) (17) .

Income Poverty and TB (18)

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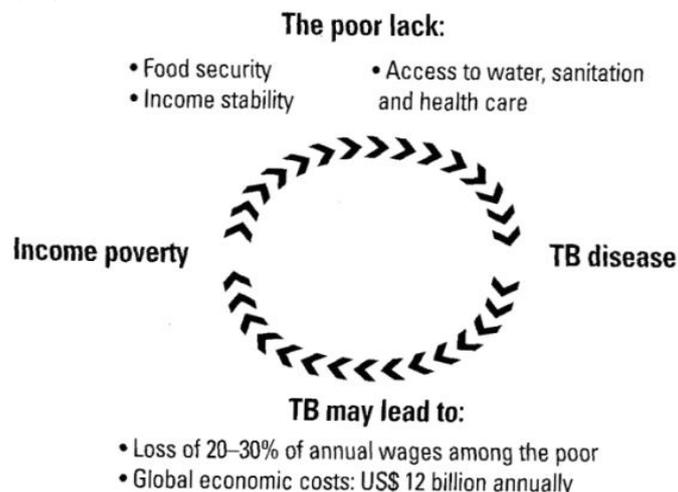
Aims And Objective: To assess the demographic status of Tuberculosis patients.

II. Material And Methods

The study was conducted in the Department of Tuberculosis and Chest Disease RNT Medical College ,Udaipur (Raj), during April 2005 to September 2006. 76 patients which were registered under RNTCP DOTS category 1st 2nd , and 3rd included in this study. The knowledge in the interviewed patient about annual income, occupation and literacy were assessed through a questionnaire and calculated p value by Microsoft excel programme.

III. Results

In this study of 76 tuberculosis patients, 71.05% were within the Age Group of 20-50 years, about 71% cases were Male and 29% were Females. Majority of patients 81.5 % belong to the Annual Income Group of less than Rs.30000, 42.1 % belong to Income Group below Rs. 15000. 54 % patients were illiterate and 46 % patients were literate. 38 % patients were Labour by occupation. 76 % of TB patients were Smokers(p value is 0.4).

Table – 1: Distribution Of Patients According To Age

S.No.	Age-Group (in years)	Number of Patients			
		Cat-I	Cat-II	Cat-III	Total
1	< 20	1	1	5	7
2	21-30	14	3	5	22
3	31-40	11	3	9	23
4	41-50	2	4	3	9
5	51-60	3	4	2	9
6	> 60	3	3	0	6
7	Total	34	18	24	76
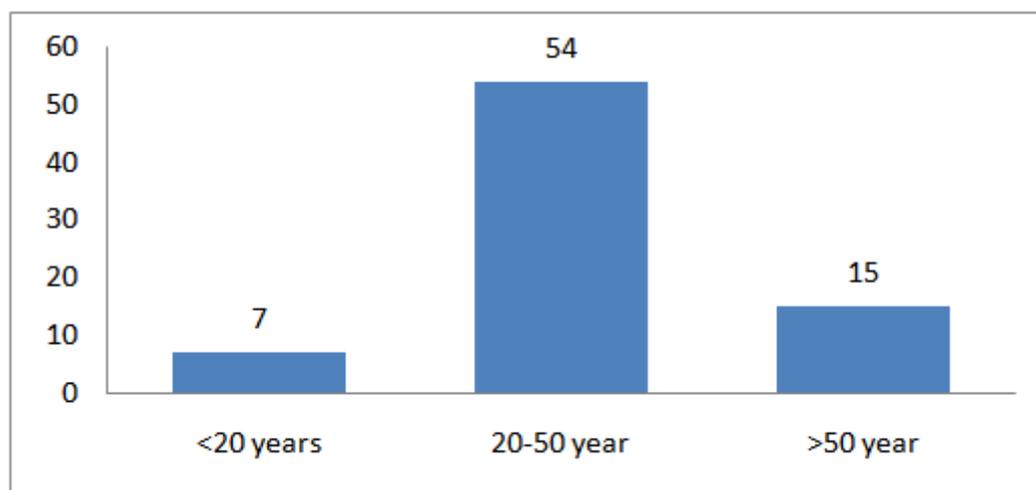
Distribution of patients according to age group

TABLE -2 Gender Wise Distribution Of Patients In Different Categories

S. No.	Sex	Number of Patients			
		Cat-I	Cat-II	Cat-III	Total
1	Male	22	16	16	54 (71.05%)
2	Female	12	2	8	22 (28.94%)
3	Total	34	18	24	76

TABLE- 3 Distribution of patients among smokers and non-smokers (p value=0.4)

PARAMETER	SMOKING	NON-SMOKING	TOTAL
MALE	42	12	54
FEMALE	16	6	22
TOTAL	58	18	76

TABLE -4 Distribution of Patients According To Literacy

S.No.	Literacy	Cat-I		Cat-II		Cat-III		Total	
		Male	Female	Male	Female	Male	Female	No	%
1	Illiterate	12	6	8	2	6	7	41	53.9
2	Primary	5	5	6	-	7	1	24	31.5
3	Middle	3	1	-	-	-	-	4	5.26
4	Secondary	2	0	2	0	3	-	7	9.21
5	Total	22	12	16	2	16	8	76	100

TABLE -5 Distribution Of Patients According To Annual Income

S.No.	Annual Income	Number of Patients			Total	
		Cat-I	Cat-II	Cat-III	No	%
1	≤ 15000	15	5	12	32	42.10
2	15001-30000	10	9	11	30	39.47
3	30001-45000	5	1	1	7	9.21
4	> 45000	4	3	-	7	9.21
6	Total	34	18	24	76	100

TABLE -6   Distribution Of Patients According To Occupation

S.No.	Occupation	Cat-I		Cat-II		Cat-III		Total	%
		Male	Female	Male	Female	Male	Female		
1	Farmer	6	2	3	-	5	-	16	21.05
2	Labour	12	2	7	-	7	1	29	38.15
3	House wife	-	7	-	2	-	7	16	21.05
4	Professional	1	-	1	-	2	-	4	5.2
5	Govt.-Servant	3	1	5	-	2	-	11	14.4
7	Total	22	12	16	2	16	8	76	

IV. Conclusion And Discussion

71% of studied patients belongs to 20-50 years of age group i.e. the most economically productive age group and affecting the back-bone of community/country in all aspects. 75% of tuberculosis cases occur in the age group 20-49 yrs representing man and woman in their most productive years (19).

67.1% belongs to annual income group of less than Rs. Thirty thousand. Tuberculosis thrives in conditions of poverty and can worsen poverty by affecting the productive age group and initiating vicious cycle. "While TB is not exclusively a disease of the poor, the association between poverty and TB is well established and wide spread"(20). A person with TB loses on average 20 to 30 percent of annual household income due to Illness (21).

71% of the cases were male and 29% were female. Case notification rates for TB in SAARC region show higher rates for males with approximately 2:1 male to female ratio(22). 54 % patients were illiterate whereas 46 % were literate and majority of them had education upto primary level. literates were   more aware about preventive measures of TB as compared to the illiterates. Majority of males were labour and farmer by occupation. Improving economic status and reducing poverty are long term goals, education is key towards better future. More emphasis should also be paid to create awareness about tuberculosis in society and community. This would enhance the strength of the campaign against tuberculosis.

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