Research Article

Awareness and knowledge about tuberculosis in patient of tuberculosis at GMERS Medical College and Hospital Dharpur, Patan, Gujarat

Kiran Rami[1], Nilesh Thakor[2], Anjali Patel*

[1]Department of Pulmonary Medicine, GMERS Medical College and Hospital, Dharpur, Patan, Gujarat, India.
[2]Department of Community Medicine, GMERS Medical College and Hospital, Dharpur, Patan, Gujarat, India.
Correspondence to: Nilesh Thakor, E-mail: drnileshthakor@yahoo.co.in

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Abstract

Background: India has the highest burden of tuberculosis (TB) accounting for one-fifth of the global incidence and is 17th among 22 high-TB burden countries in terms of incidence rate of TB.

Objective: To know the sociodemographic profile of patients with TB and to assess knowledge and awareness regarding TB among patients with TB.

Materials and Methods: A cross-sectional study was carried out including all TB treatment units of GMERS Medical College and Hospital Dharpur, Patan, Gujarat, India, for 3 months from June to August 2014. Total 151 registered patients of all age groups during June to August 2014 were selected by purposive sampling. After taking verbal consent, all patients were interviewed on the basis of predesigned, pretested pro forma. Information was collected regarding their health status, DOTS (directly observed treatment short course) therapy, and their awareness regarding TB. The data were statistically analyzed using SPSS software.

Result: Of 151 patients, 104 (68.8%) were male aged from 14 to 80 years; 147 (97.3%) were from rural area, 63 (41.7%) were illiterate, 130 (86%) belonged to joint family, and 118 (78.1%) had less than Rs. 500 per capita income. More than 50% patients with TB were aware of person-to-person transmission of TB. About 62 (41.05%) patients of TB knew mode of spread of TB and 95 (62.91%) correctly answered that cough was the most common symptom. About 91 (60.26%) patients said that TB can be prevented by BCG vaccine, 99 (65.56%) knew about DOTS clinic, 40 (26.9%) knew about TB from doctor, and only 90 (59.6%) believed that TB was curable.

Conclusion: Apart from pharmacological treatment, poor knowledge regarding TB among patients of TB also needs great attention.

KEY WORD: Tuberculosis, pulmonary TB, DOTS therapy, RNTCP, knowledge of TB

*2nd year MBBS student, GMERS Medical College, Dharpur, Patan, Gujarat, India.

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Introduction

India is the highest tuberculosis (TB)-burden country accounting for one-fifth of the global incidence, and it ranks 17th among 22 high-TB-burden countries in terms of TB incidence rate. Every year, approximately 1.8 million persons develop TB, of which about 0.8 million are new smear-positive highly infectious cases. About 0.32 million people die every year due to TB. Of every five Indians, two are infected with TB bacillus. Every day about 5000 people develop the disease.[1,2] In 2013, total number of patients with TB in Gujarat and Patan

Table 1: Distribution of patients according to their sociodemographic profile (*N* = 151)

Character	Specific character	No. of patients	Percentage
Sex	Male	104	68.87
	Female	47	31.12
Age groups (years)	<25	21	13.90
	25–35	40	26.49
	36–45	30	19.86
	>45	60	39.73
Residence	Rural	147	97.35
	Urban	4	2.64
Education	Illiterate	63	41.72
	Primary	43	28.47
	Secondary	15	9.93
	Middle school	19	12.58
	Higher secondary	7	4.63
	Above higher secondary	3	1.98
Type of family	Nuclear	21	13.90
	Joint	130	86.09
Per capita monthly income (Rupees)	<500	118	78.14
	501–1000	13	8.60
	>1001	20	13.24

Table 2: Distribution of patients according to knowledge about TB (*N* = 151)

Characters	Specific characters	Number	Percentage
Heard of TB	Yes	109	72.18
	No	42	27.81
Cause of TB	Infection by germ	62	41.05
	Water	5	3.31
	All above causes	23	15.23
	Cause not known	61	40.39
Mode of spread	Coughing	62	41.05
	Talking	10	6.62
	Eating	1	0.66
	All above modes	74	49.00
	Mode of spread not known	66	43.70
Source of knowledge	Doctor	40	26.49
	Family	9	5.96
	Friend	23	15.23
	Self	11	7.28
	Neighbor	2	1.32
	Mass media	5	3.31
	Health personnel	11	7.28
	Unknown	50	33.11
Symptoms	Able to specify symptoms	95	62.91
	Not able to specify symptoms	56	37.08

district was 33089 and 835, respectively.[3] TB can be treated successfully by taking medication as suggested by health authorities, but as medicines need to be taken for months hence compliance is an important factor. The compliance for treatment can be increased if patient is well aware about the disease, treatment and preventive measures.

Few studies conducted to know about the awareness of TB found that awareness and knowledge vary from place to place. A study regarding awareness about TB conducted in Surat, a region in south Gujarat, India, showed that 80% people knew about symptoms of TB.[4] Another study conducted by Indian Chest Society showed that 84% subjects were aware of the free treatment available for TB under National Program.[5] A study conducted in slum areas of Delhi showed that 83.6% population knew about TB. It is worth noting that disease such as TB may have some attached social stigma, which may prevent a person going to health authorities.[6] As awareness and knowledge about TB vary in different geographical locations and a relationship exists between knowledge and prevention/compliance, so it is worth conducting this type of study in this area of Gujarat. This study was a humble effort to throw light on sociodemographic profile, knowledge, and awareness regarding TB among patients with TB.

Materials and Methods

This cross-sectional observational, descriptive epidemiological study was conducted for 3 months from June to August 2014 at GMERS Medical College and Hospital Dharpur, Patan, located in north Gujarat, India. It was conducted among all the 151 patients with TB who were currently under treatment at selected hospital. Patients were interviewed at a time when they visited OPD and TB ward. Patients were informed about the purpose of the study and their informed written consent was taken and then they were asked questions regarding knowledge and awareness about TB. A questionnaire containing sociodemographic variables such as name, age, sex, religion, literacy, status and knowledge about symptoms, mode of transmission, etiology, and prevention of TB was prepared as study tool and tested. The collected data were analyzed using statistical package for social science (SPSS trial version) and inferences were drawn using χ^2-test for difference between two proportions.

Results

Of 151 patients, 104 (68.87 %) were males aged from 14 to 80 years. Majority of respondents (47%) were in the age group of 25–45 years. About 130 (86%) patients belonged to joint family, 147 (97.35%) belonged to rural areas, and 41.72% were illiterate. Almost all females were housewives and majority of males were farmers. Less than Rs. 500 was the per capita income of 118 (78.1%) patients. The mean per capita monthly income was Rs. 200 [Table 1].

About 109 (72.18%) patients had heard about TB. When they were asked about the cause of TB, the correct answer “infection” was given by only 41.05% respondents, whereas 61 (40.39%) patients were unable to specify any cause. Regarding the mode of spread of TB, the correct response

Table 3: Distribution of patients regarding awareness of prevention and treatment of TB (*N* = 151)

Type of knowledge	Knowledge of patients	No. of patients	Percentage
Knowledge regarding curability of TB	Yes	90	59.60
	No	61	40.39
Knowledge regarding prevention of spread of TB infection to others	Yes	94	62.25
	No	57	37.74
Knowledge regarding DOTS center for treatment of TB	Yes	99	65.56
	No	52	34.43

was (cough, spit, sputum –droplets ,air - borne) given by 41.05% patients, whereas 66 (43.70%) patients did not have any idea about it. Fifty-one (33.7%) patients acquired knowledge from health professional and 95 (62.91%) were able to specify symptoms of TB [Table 2].

Ninety (59.60%) patients knew about curability of the disease. Only 94 (62.25%) patients had knowledge regarding prevention of spread of TB infection to others and 99 (65.56%) had knowledge regarding DOTS (directly observed treatment short-course chemotherapy) center for TB treatment under Revised National Tuberculosis Control Program [Table 3]. The literacy status [Table 4] had a significant influence on the awareness about TB. It was evident that literates were significantly more aware than illiterates regarding communicability, cause, mode of transmission, symptoms, curability of TB, and place of treatment.

Discussion

India has the highest number of cases of TB in the world, and it has to be addressed at any cost.[7] Knowledge and awareness regarding various aspects of TB are very important among the masses to curb it. The mass survey carried out by health government of India reported poor level of awareness among disadvantaged section of the society.[8] Literacy has been identified as the key deciding factor for the level of awareness. The KAP (knowledge, attitude, and practice) study conducted among sandstone quarry workers in Rajasthan by Yadav et al.[9] showed that literate people had significantly higher level of awareness and knowledge regarding TB. The study conducted in rural areas of Delhi by Fochsen et al.[10] showed that >95% participants were aware of the cause of TB**.** In a study conducted by Kar and Logaraj,[11] only 20% people replied cough or sputum as a mode of spread of TB and rest 80% had no knowledge or wrong knowledge about mode of spread of TB. These finding are also found to be consistent with the results of our observational study.

In this study, 41.05% patients told that TB spread through coughing and spitting. In our study, 62.91% correctly specified symptoms of TB. In a study conducted by Matta et al.,[12] fever (50.6%), cough (59.3%), weight loss (20.6%), expectoration (11.3%), and hemoptysis (11.3%) were reported to be the main symptoms of TB known to the people. In a study conducted by Subramaniam,[13] cough, fever, and hemoptysis were known to be the main symptoms of TB to 66%, 13%, and 15% individuals, respectively. In a study conducted by Malhotra et al.,[6] 96.6% patients were aware about the transmission of TB. In our study, 52.98% patients were aware of the transmission of TB from one to another.

Some patients had incorrect knowledge about the cause such as hereditary, smoking, alcoholism, and poor diet. A prominent finding of our study was that 45.03% patients of the hospital at Dharpur, Patan, knew that TB can be prevented by BCG vaccine. In a study conducted by Vidhani and Vadgama,[4] 9.0% patients knew that TB can be prevented by BCG vaccine.

In our study, poor knowledge about cause, symptoms, and transmission of the disease was observed in females

Table 4: Awareness level about TB according to literacy status (*N* = 151)

Awareness	Knowledge of patient	Literate (*n* = 88)	Illiterate (*n* = 63)	Total (*n* = 151)	χ^2–value; *p*-value
Is it communicable disease	Yes	46 (51.13%)	25 (39.68%)	71 (47.01%)	5.189; <0.05
	No	32 (36.36%)	38 (60.31%)	70 (46.35%)	
Is it caused by germ	Yes	46 (51.13%)	22 (34.92%)	68 (45.03%)	7.247; <0.05
	No	33 (37.5%)	50 (65.07%)	83 (54.96%)	
Is it spread by droplets	Yes	43 (48.86%)	25 (39.68%)	68 (45.03%)	3.33; <0.05
	No	35 (39.77%)	48 (60.31%)	83 (54.96%)	
Is it curable	Yes	66 (75%)	25 (39.68%)	91 (60.26%)	19.12; <0.05
	No	22 (25%)	38 (60.31%)	60 (39.73%)	
Ability to specify symptoms of TB	Yes	65 (73.86%)	32 (50.80%)	96 (63.57%)	8.958; <0.05
	No	23 (26.13%)	32 (35.22%)	55 (36.42%)	
Knowledge regarding DOTS center for treatment of TB	Yes	72 (81.81%)	28 (44.44%)	100 (66.22%)	22.928; <0.05
	No	16 (18.18%)	35 (55.55%)	51 (33.77%)	

and in illiterate patients. From the foregoing awareness study of patients, we could infer that although knowledge regarding etiology, symptoms, and mode of transmission was satisfactory; however, female and illiterate individuals need to be focused on a priority basis for education regarding the disease. Misconceptions and incorrect knowledge such as food and utensils as mode of transmission needs greater attention.

The World Health Organization also recognizes the importance of TB-related KAP survey in advocacy, communication, and social mobilization strategy planning.[14]

Conclusion

Apart from pharmacological treatment, poor knowledge of TB among patients of TB also needs great attention. An attempt could be made in future to improve awareness among illiterates to remove myths and misconceptions, to allay the social stigma attached with it, and to decrease TB transmission.

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