RESEARCH PAPER | Medical Science | Volume : 5 | Issue : 6 | June 2015 | ISSN - 2249-555X

Awareness and Health Seeking Behavior Among New Sputum Positive Tuberculosis Patients Diagnosed Under RNTCP at Medical Colleges of Puducherry

KEYWORDS: health seeking behavior, tuberculosis, knowledge, private

Murugan N
Department of Community Medicine, Pondicherry Institute of Medical Sciences, Puducherry

Ramesh Chand Chauhan
Department of Community Medicine, Pondicherry Institute of Medical Sciences, Puducherry

Johnson Cherian
Department of Community Medicine, Indira Gandhi Medical College, Puducherry

Anil Jacob Purty
Department of Community Medicine, Pondicherry Institute of Medical Sciences, Puducherry

Zile Singh
Department of Community Medicine, Pondicherry Institute of Medical Sciences, Puducherry

Sherin Billy Abraham
Department of Community Medicine, Pushpagiri Institute of Medical Sciences & Research Centre, Thiruvalla

ABSTRACT *Tuberculosis patient moves from one health care provider to another before they are finally diagnosed and started on treatment. For delayed diagnosis of TB, one major reason is repeated visits at the same health care level. This community based descriptive study was done in four medical colleges of Puducherry. Using systematic random sampling, from a list of all adult new pulmonary sputum positive tuberculosis patients, 300 cases were selected. Using a pre-designed and pre-tested questionnaire the information on socio-demographic characteristics, major presenting symptoms, duration of symptoms was collected. Cough (76.9%), followed by fever (69.6%), weight loss (68.1%), chest pain (54.2%) and hemoptysis (11.6%) were common presenting symptoms. Private hospitals/ clinics (47.2%) were the most common health facilities first visited. Only 20.3% of the patients were correctly aware of the cause of disease and only 26.8% were aware of availability of free diagnosis services. Majority of the patients were aware that TB is diagnosed by sputum examination (83.3) and chest x-ray (80.5%). Knowledge about cause and treatment of tuberculosis among TB patients was quite good.*

INTRODUCTION

India has the highest burden of tuberculosis (TB) globally, with an estimated incidence of 176 cases per lakh population.[1] Like any other illness, private and informal health care providers (HCPs) are often the first source of care for TB. Patient moves from one HCP to another before they are finally diagnosed and started on anti-tuberculosis treatment.[2] Studies suggested that the diagnosis of TB is often delayed, and one major reason is repeated visits at the same health care level.[3]

The desired HSB has been related to visiting official channels in a formally recognized health-care system. In almost all the developing countries, the public and the private health sector coexist but, private care provider are usually preferred all around due to easy accessibility even in the night, quick relief and individual attention.

Several factors have been identified as influencing health care seeking behavior including the individual's perception of disease, socio-economic status, stigma, extent of awareness about the disease, the severity of the disease, distance between the patient's residence and health services and expertise of health personnel.[4] Understanding the health care seeking behavior is essential to provide need based health care services for tuberculosis control.

Further, community based studies well reflects the preferences in seeking health care services.

As there was no study about health care seeking behavior of TB patient diagnosed at the medical college hospitals, this study was done to assess the HSB of tuberculosis patients diagnosed at medical college hospitals in Puducherry.

METHODOLOGY

A community based study was done during year 2010 in Union territory of Puducherry. With total population of 1.2 million, union territory of Puducherry is having 9 medical colleges. At the time of study, RNTCP was implemented in four medical colleges here. All new sputum positive TB patients diagnosed at these medical colleges, during January to December 2009 were included in the study.

Study population and sampling

For enrolment the participants, a list of all new pulmonary sputum positive tuberculosis patients, who were of 15 years and above and were diagnosed under RNTCP at the DMCs of four selected medical colleges during the year 2009 was prepared. A total of 486 sputum positive patients were diagnosed during year 2009. Using systematic random sampling, from the list of all new PTB patients, 300 were selected for participating in the study. As these patients were started on treatment or referred to PHIs, their details were cross checked with the referral register and treatment cards maintained at the District Tuberculosis Centre, Puducherry.

Ethical considerations

Study protocol was approved by the Institute Ethics Committee of Pondicherry Institute of Medical Science, Puduch-

Volume : 5 | Issue : 6 | June 2015 | ISSN - 2249-555X

erry. The permission was also taken from the Department of Health, Government of Puducherry.

Data collection

All the selected TB patients were contacted at their homes and written informed consent was obtained. The participants were interviewed by trained health workers and information about risk factors of tuberculosis and their health seeking behavior was collected. The questionnaire was pre-tested and translated into the local language and was re-translated back. The questionnaire also includes information on socio-demographic characteristics, major presenting symptoms, duration of symptoms and amount of money spent during and after diagnosis. Those patients who could not be contacted during first visit were contacted again.

Data entry and analysis

Data analysis was performed using the statistical packages SPSS for Windows version 16. Summary output tables of frequency, mean and standard deviations were made.

RESULTS

A total of 486 new sputum smear-positive TB patients were diagnosed at selected medical colleges during the study year and 138 patients were interviewed.

Socio-demographic characteristics

Among 138 new sputum smear positive TB patients, 67.4% were male and 68.8% were married. The mean age of participants was 41.8±17.3 years (ranges 15-87 years). Majority (55.7%) of the patients were in the age group of 15-44 years. Most (86%) of the cases were literate and in 78.3% cases, family size was ≥5. Among them 8% and 10% were smokers and alcohol user respectively. (Table 1)

As shown in table 2, most common presenting symptom reported was cough (76.9%), followed by fever (69.6%), weight loss (68.1%), chest pain (54.2%) and hemoptysis (11.6%). Private hospitals/clinics (47.2%) were the most common health facilities first visited. Majority (77.8%) of the cases reported to use public transport for visiting the health facility. For 60.2% cases, designated microscopy center (DMC) was situated at a distance of more than 20 kilometers from their residences and almost half of the cases have to travel for more than 1 hour to reach to DMCs.

Table 1. Socio-demographic characteristic of tuberculosis patients (n=138)

Characteristic		Frequency	%
Age (years)			
	<45	77	55.7
	45 and above	61	44.3
Sex			
	Female	45	32.6
	Male	93	67.4
Education			
	Illiterate	24	17.4
	Primary	31	22.5
	Middle	25	18.1
	Secondary	25	18.1
	Higher secondary and above	33	23.9
Occupation			
	Farmer	30	21.7
	Labourer	47	34.1
	Homemaker	15	10.9
	Govt. service	07	5.1
	Private service	06	4.3
	Others	33	23.9
Monthly personal income (INR)			
	≤ 2000	51	37.0
	2001-3000	15	10.9
	>3000-4000	21	15.1
Marital status			
	Married	95	68.8
	Unmarried	40	28.9
	Widow	03	2.2
Family size			
	≤5	108	78.3
	>5	30	21.7
Smoking			
	Yes	11	8.0
	No	127	92.0
Alcohol consumption			
	Yes	15	10.9
	No	123	89.1
	Total	138	100

Volume : 5 | Issue : 6 | June 2015 | ISSN - 2249-555X

Table 2. Presenting symptoms and type of health care facility first visited			
		n	%
Presenting symptoms*			
	Cough	106	76.9
	Fever	96	69.6
	Weight loss	94	68.1
	Chest pain	61	44.2
	Hemoptysis	16	11.6
Health care facility first visited			
	Private hospitals/ clinics	74	53.6
	Government hospitals	19	13.8
	Medical college	45	32.6
Number of visits to health care facility			
	≤ 5	115	83.3
	6-10	15	10.9
	>10	8	5.8
Mode of transport			
	Public transport	103	74.6
	Own/hired vehicle	21	15.2
	Others	14	10.2
Distance to DMC (Kms)			
	≤20	55	39.85
	21-40	20	14.50
	>40	63	45.65
Travel Time from Residence to DMC (Hours)			
	< 1	68	50
	1-2	21	15
	>2	49	35
* Multiple response			

Only 20.3% of the cases were correctly aware of the cause of disease. Most of the cases (80.4%) were aware that TB is a communicable disease but only 26.8% were aware of availability of free diagnosis services. Majority of the cases were aware of the fact that TB spreads when a TB patient coughs (78.3%) and 83.3 cases were aware that TB is diagnosed by sputum examination (Table 3)

Table 3. Patient's knowledge about TB causation and transmission			
		Frequency	%
Causative factor for TB			
	Smoking and alcohol	19	13.8
	Hereditary	3	2.2
	TB causing micro-organism	28	20.3
	Hard work (labour)	5	3.6
	No definite answer	83	60.1
Is TB communicable			
	Yes	111	80.4
	No	6	4.4
	Not sure	21	15.2
Awareness about availability of free diagnostic services			
	Yes	37	26.8
	No	101	73.2
Transmission of TB occurs			
	When a TB patient coughs	108	78.3
	Having common utensils	2	1.4
	Others	28	20.3
TB diagnosis			
	Blood examination	76	55.1
	Sputum examination	115	83.3
	General body examination	1	0.7
	Stool and urine examination	6	4.3
	Chest X-ray	112	81.2
	Others	12	8.7

DISCUSSION

Understanding of health care seeking behavior is utmost important for early detection and treatment of tuberculosis. Most of the cases in the present study first visited private practitioners. Similar finding were reported by other studies.[6,7] As majority of the cases are seeking health care from private sector, it is a good step to involve them for control of TB under RNTCP. Further, most of the free diagnostic and treatment facilities are with public sector, there is need to extend facilities to other health care providers where most of the cases with chest symptoms are visiting.

In the present study, 60.2% cases reported that the nearest designated microscopy center was situated at a distance of more than 20 kilometers from their residence. Non-availability of nearby diagnostic facility is one of the important causes of delay in the diagnosis of the TB cases.[8]

Most cases of TB presents with cough, followed by fever, weight loss, chest pain and hemoptysis. Another study from India found that individuals reported cough with sputum, weakness and breathlessness, fever, and hemoptysis are common symptoms of TB.[9]

In present study, most of the cases (80.4%) were aware that TB is a communicable disease and spreads when a TB patient coughs (78.3%). This is good for any community to have more knowledge about the transmission of disease as preventive actions are related to the awareness population.

Further, 83.3% of the cases were aware that TB is diagnosed by sputum examination (83.3) and chest x-ray (80.5%), but only 26.8% were aware of availability of free diagnosis services, which emphasize the need of more publicity about the availability of free diagnostic facilities under the national TB control program.

Conclusions: Knowledge about cause and treatment of tuberculosis among TB cases was quite good; however, many misconceptions also exist. Misconceptions about transmission of disease like spread through utensils could possibly lead to discrimination. Further, private health care providers were the most common health care facility visited by TB symptomatic, their mainstreaming is essential for the success of the revised national TB control program.

Volume : 5 | Issue : 6 | June 2015 | ISSN - 2249-555X

REFERENCE

1. World Health Organization. Global tuberculosis report, 2014. WHO/HTM/TB/2012.6. Geneva, Switzerland: WHO, 2014. | 2. Hazarika I. Role of private sector in providing tuberculosis care: evidence from a population-based survey in India. J Glob Infect Dis 2011; 3(1): 19. | 3. Suganthi P, Chadha V K, Ahmed J, et al. Health seeking and knowledge about tuberculosis among persons with pulmonary symptoms and tuberculosis cases in Bangalore slums. Int J Tuberc Lung Dis 2008; 12: 1268–1273. | 4. Pantoja A, Floyd K, Unnikrishnan K P, et al. Economic evaluation of public-private mix for tuberculosis care and control, India. Part I. Socio-economic profile and costs among tuberculosis patients. Int J Tuberc Lung Dis 2009; 13: 698–704. | 5. Sharma SK, Mohan A, Chauhan LS, Narain JP, Behera D, Kumar A, et al. Contribution of medical colleges to tuberculosis control in India under the Revised National Tuberculosis Control Programme (RNTCP): lessons learnt & challenges ahead. Indian J Med Res. 2013;137:283–94. | 6. Uplekar M, Juvekar S, Morankar S, et al. Tuberculosis patients and practitioners in private clinics in India. Int J Tuberc Lung Dis. 1998; 4: 324–329. | 7. Uplekar M, Rangan S. Tackling TB: the search for solutions. Bombay, India: The Foundation for Research in Community Health, 1996. | 8. Natesan M, Chauhan RC, Cherian J, Purty AJ, Singh Z, Joice S, Abraham SB. Patient and health system delay among new pulmonary tuberculosis patients diagnosed at medical college hospitals in Puducherry, India. Int J Res Med Sci. 2015; 3(1): 188-193. | 9. R. Malhotra, D. K. Taneja, V. D. Dhingra, S. Rajpal, and M. Mehra, "Awareness regarding tuberculosis in a rural population in Delhi," Indian Journal of Community Medicine, vol. 27, no. 2, p. 62, 2002. |