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Knowledge About Tuberculosis and DOTS Centre Among Newly Registered Pulmonary TB Patients Under DOTS Centre's Located in a Municipal Ward of Metropolitan City, Maharashtra.

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ABSTRACT:

Tuberculosis (TB) is a serious public health problem in India as ranks first among 22 high burden countries, causing immense morbidity, mortality. Several factors have been identified including the individual's perception of disease, socioeconomic level, extent of awareness about the disease and dots centre. The present study was aimed to analyze the knowledge of TB and DOTS centers among the newly registered pulmonary TB patients. This was an observational cross sectional interviewed based study conducted with newly registered pulmonary TB patients at DOTS centres. Frequency distributions showing number and percentages were generated for each identified outcome variables. The results show 36 % reported germ as a cause of TB. 30% reported inhalation is route of transmission.71% reported that TB is curable while 65 % cases told that

TB can be prevented. 24(50%) has responded that they have got the TB from someone who had TB. only 105(42.0%) study subjects were aware about the TB related health facility in their area, 132(52.8%) were aware about the free availability of drugs. Regarding the DOTS centre facilities like timing, location and service provider were not suitable for, 94(37.6%), 19(07.6%), & 8(3.2%) respondents respectively. The study concludes that not only chemotherapy but the knowledge about TB among the pulmonary TB patients needs to be enhanced so as to prevent and control of TB. The general population should make aware about DOTS centre's located in community. Health education at the time of initiation of chemotherapy among pulmonary TB patients could be useful strategy to spread the knowledge about TB among the general population.

Key words: Knowledge, Tuberculosis, DOTS Centre, PTB Patients.

INTRODUCTION

Among infectious diseases Tuberculosis (TB) is the single largest killer of young and adult populations in the world. There were an estimated 8.8 million new TB cases in 2005 and 7.4 million cases in Asia & sub- Saharan Africa, a total of 1.6 million people died of TB.[1]

MDG Target 8 ("Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases [including TB]") will be met before 2015. For the reasons that are not fully understood, in Asian countries that report high rates of case detection and treatment success, the incidence has not been reduced as quickly as expected. This is linked to the conclusion that global burden of TB is not falling fast enough to satisfy the more demanding targets set by the Stop TB Partnership. At the current pace, 1990's prevalence and mortality rates will not be halved worldwide by 2015.[2]

TB is a serious public health problem in India as ranks first among 22 high burden countries, causing immense morbidity, mortality & distress individuals, families & communities. Several factors have been identified including the Individual's perception of disease, socioeconomic level, extent of awareness about the disease and dots centre. It is seen that the patients of TB hide their disease from family, relatives, and community due to stigma, which is again due to lack of knowledge, and India lags far behind the developed countries in managing TB due to this social stigma and lack of proper knowledge[3]. Hence study was aimed to analyze the knowledge of TB and DOTS centers among the newly registered pulmonary TB patients.

MATERIAL & METHODS:

The present study was performed at all 20 DOTS centers located in a ward of municipal corporation area of a metropolitan city. This was an observational cross sectional interviwed based study. Newly diagnosed pulmonary TB sputum positive cases, sputum negative case & having age above 15 yrs were included in the study. While defaulters or TB patients started on CAT II Regimen, below 15 years of age, extra pulmonary TB patients excluded from study.

All patients newly diagnosed with the pulmonary TB and initiated on short course chemotherapy

(SCC) during 15th March to 15th September at each of the DOTS centers were interviewed. All eligible cases were interviewed during the first two weeks of initiation of SCC in the respective dots centre after obtaining informed consent. Institutional Ethical Committee approval was obtained for study purpose. Consent of the eligible cases was taken for participation in the study and prior to interviews

For study purpose, data extracted from questionnaire included socio-demographic variables, knowledge about TB and DOTS centre. The data were entered, cleaned in Microsoft™ Excel® 2010. Frequency distributions showing number and percentages were generated for each identified outcome variables.

RESULT

Total 250 newly diagnosed pulmonary TB cases were initiated on SCC regimen at 20 DOTS centers during study period. 63.6% (159) were sputum positive while 36.4% (91) sputum negative.

Table 1 shows that 63.6 % of the patients were from economically productive age group (15-44 yrs). Sex distribution wise,165 (i.e. 66.0%) were males. 71(28.4%) were migrants, occupational status wise the majority were skilled workers 78 (31.2%) followed by the labourer contributing the 15.6% cases. Education status shows 46 % completed primary education. 127 (50.8%) have monthly income less than Rs. 2000. Among those cases who stayed with family, 116(64.1%) having median family size of 6.5.

Table 1: Socio-demographic characteristics of the Pulmonary Tuberculosis patients started on SCC during the study period.

Variables	Number (n=250)	Percentages
Age groups(years)		
15-19	45	18.0
20-24	40	16.0
25-34	57	22.8
35-44	42	16.8
45-54	34	13.6
>55	32	12.8
Sex		
Male	165	66.0
Female	085	34.0
Migration		
Yes	071	28.4
No	179	71.6
Marital status		
Unmarried	045	18.0

Married	116	46.4
Separated/divorced/widowed	089	35.6
Occupational status		
Private sector employee	78	31.2
Labourer	39	15.6
Students	38	15.2
Unemployed	36	14.4
House-wife	33	13.2
Government Job	26	10.4
Education		
Less than primary	045	18.0
Completed primary & up to10th Std.	116	46.4
10th slandered & above	089	35.6
Monthly Income		
< 2000	127	50.8
2001-5000	093	37.2
>5000	030	12.0
Family Size		
<=4	056	30.9
5 – 8	116	64.1
>=9	009	05.0

36 % reported germ as a cause of TB. 30% reported inhalation is route of transmission.71% & 65 % reported that TB is curable & prevented respectively. (Table 2)

Table 2: Knowledge about Cause, transmition, Curability and Prevention of TB among the Pulmonary Tuberculosis patients started on SCC during study period.

Variables	Numbers	Percentage
Cause of tuberculosis		
Germ	90	36.0
Cigarette	71	28.4
Bewitched	15	06.0
Inherited	02	00.8
Other	07	02.8
Do not know	65	26.0
Disease transmitted		
Inhalation	75	30.0
Sharing	99	39.6
Inherited	01	00.4
Overcrowding	23	09.2
Blood contamination	02	00.8
Do not know	50	20.0
TB curable		
Curable	178	71.2
Not curable	022	08.8
Do not know/not sure	050	20.0
TB prevented		
Yes	164	65.6
No	031	12.4
Do not know/not sure	055	22.0

124(50%) has responded that they have got the TB from someone who had TB. Smoking as the perceived cause of TB in 58(23%) respondents followed by dirty environment.173 (70%) responded to cover face while cough as a precautions to avoid the spread of TB. Source of information about TB was from media (30%) followed by the former TB patient (25%). 78 percent aware about the exact course of SCC duration.

Table 3 shows 105(42.0%) study subjects were aware about the TB related health facility in their

area, 132(52.8%) about the free availability of drugs & 164(65.6) about the side effect of the drug. 150(60%) patients responded that they are accepting the under observation treatment. 58% responded that medicine box should be provided at the home. Regarding the DOTS centre facilities like timing, location and service provider were not suitable for, 94(37.6%), 19(07.6%), & 8(3.2%) respondents respectively.

Table 3: Awareness about TB related health facility & perception about the DOTS centre among pulmonary tuberculosis patients started on SCC during the study period.

Variables	Number	Percentage
TB related facility in the vicinity		
Yes	105	42.0
No	145	58.0
Availability of free drug before diagnosis		
Yes	132	52.8
No	118	47.2
Side effects of the TB drugs		
Yes	164	65.6
No	86	24.4
Treatment under observation acceptable		
Yes	150	60.0
No	100	40.0
TB medicine Box should be provided to you		
Yes	100	40.0
No	150	60.0
DOTS centre Timing is suitable for you		
Yes	156	62.4
No	94	37.6
Location of DOTS centre suitable		
Yes	231	92.4
No	19	07.6
Service provider at DOTS centre suitable for you		
Yes	242	96.8
No	08	03.2

DISCUSSION

TB is a public health problem in India. Revised national TB Control Programmed (RNTCP) along with WHO stop TB strategies is helping to diagnose and cure the TB patients. However baseline survey conducted by the Central TB Division, Ministry of Health, Government of India, reported poor level of awareness among general population[4]. This one had been identified as challenge impeding progress toward TB control. In view of this, the present study was carried out to assess the knowledge about TB and DOTS centre among newly diagnosed pulmonary TB patients started on SCC under DOTS centers.

More than 60 percent were sputum positive showing the infectivity is more in the community and these cases are infectious to others if early diagnosis and prompt treatment delayed along with the knowledge about the TB is not imparted.

TB is more prevalent in men than in women may be due biological vulnerability of men to infections or exposure at work place. 63% were from the economic productive age group. Wandwalo E.R. & O.Merkve. (2000) also observed 69% of pulmonary TB cases belongs to the <= 45 age group[5]. 70 % were migrants, shows Mumbai has more migration because of economic capital of India. Duration of average stay of migrant in Mumbai is of 5 years. Job profile, working conditions are the factors contributing to the more number of percentages of the cases in skilled workers & laborer.

Tobgay K.J. et al[6] in the study had average family size of 5.7 (range 1-12) while during present study family size with average of 6.5 which is more. The reason could be the study conducted in a highly overcrowded metropolitan city.

Under RNTCP, medical officer as well as paramedical staff at peripheral health institute is supposed to give knowledge about TB regarding cause, mode of transmission, precautions to take after TB, its treatment dosage etc[7].

In the present study, four important questions like cause, mode of transmission, curability and its prevention regarding TB knowledge were assessed. 36 % reported germ as a cause of TB. This finding suggests even after diagnosis or initiation of SCC of TB, patient has not been clearly educated about the TB. A study conducted at rural Delhi in 2006 showed very encouraging result where more than 95% participants were aware of cause of TB[8]. But Palash et al, during their study seen a minor proportion of patients told about germ or infection as the cause of TB, which indicates an incomplete perception of TB[3].

Regarding the modes of transmission, the only correct answer inhalation or air borne was answered by a less than half of PTB diagnosed patients (30%). While sharing of food/cloths was reported by 40 percent of participant with 20 % not aware of mode of transmission. This indicates that there was a wide knowledge gap regarding TB among the TB patients. These findings are similar with Palash et al[3]. Educating about the misconception of food and utensils as route of transmission so as to remove the stigma attached to the disease [9].

71% reported that TB is curable shows majority are aware about the curability about the diseases.

This may be because of the media more focusing on the curability of the disease. Malhotra et al[10]& Yadav SP[11] et al observed more percentage about TB curability than our study. But these studies were conducted among the general population and the education standards are not comparable between different populations. While 65 % cases told that TB can be prevented & 70 % responded to cover face at the time of cough as a precaution to avoid the spread of TB. This finding are similar with Malhotra et al [10]while lesser with the study from Yadav SP[11] and more than observed in study conducted by Madhu Vidhani & Parul Vadgama[9]. Direct and indirect methods of health education significantly enhance the awareness about the nature, spread and prevention of TB[12].

124(50%) has responded that they have got the TB from someone who had TB. The finding is less than that found in other study[9]. While 23 percent reported smoking as a perceived cause which is more than that observed (17.4) in Palash et al study [3]. Jurcev et al also studied some wrong beliefs about TB cause and smoking was one of them [13]. Knowledge about how the disease is contracted in them must be explained to the newly diagnosed patients.

Source of information about TB was from media (30%) followed by the former TB patient (25%). This finding was quite similar in a study at Delhi study by Malhotra et al[10] and in contrast to study at Rajasthan[11] and at slums of Delhi[14] which shows lesser study population got their awareness from mass media. Study in Orissa about ACSM, TB knowledge, attitude, and behavior were interviewed among general population where traditional healers were seen by a number of community respondents as more trusted source of information[15] .Former TB patients can be maximally utilized as a source of TB information among the community.

In the present study, 78 % of PTB cases aware about the exact course of SCC duration. This finding is more than other studies[9,16]. Pre treatment counseling about the course of the SCC including Intensive Phase and Continuation Phase should be imparted among the pulmonary TB patients initiated on DOTS.

Majority of patients (52%) were aware about free availability of drug but only 42 % knowing the facility in their area for getting the free drugs. These findings are lesser as compared to the study by Palash et al[3]. General public should be made aware about nearest right place for treatment to avoid delays and spread of infection. More than 50 percent of TB patients reported that they will be more comfortable if medicine is available at home. This could be because of stigma about the disease & as patient has to come to the DOTS centre on alternate days could get easily identified in the community of having TB. So they prefer to take medicine at home. But these findings are in contrast to the study of Kamineni VV et al[15] which showed that demand for DOTS has been increased by the public as a result of improved mobilization of health workers.

Also during study, 37.6% responded the non suitability of timing of DOTS centre might be because majority are working in private or on daily wages so loss of wages is the major concern

for the same. Regarding location and service provider was no major issue among the patients.

The study concludes that not only chemotherapy but the knowledge about TB among the pulmonary TB patients needs to be enhanced so as to prevent and control of TB in the community. Health education at the time of initiation of chemotherapy among pulmonary TB patients could be useful strategy to spread the knowledge about TB. World Health Organization also recognizes the importance of TB-related knowledge, attitude and practice surveys in advocacy communication and social mobilization (ACSM) strategy planning [17].

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