

Awareness about Tuberculosis in people living with HIV/ AIDS: A cross Sectional Institutional Study.

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ABSTRACT

Introduction: Worldwide, Tuberculosis (TB) is the most common opportunistic infection affecting HIV seropositive individuals and it remains the most common cause of death in patients with Acquired Immune Deficiency Syndrome. It is estimated that 50 to 60% of HIV infected people will develop TB in their lifetime. Keeping this in background this study was planned to assess the knowledge, attitudes and practices on TB in HIV positive patients.

Methods: A cross sectional study was carried out in HIV positive individuals attending an ART centre. 100 attendees were selected by systematic random sampling method and interviewed with a pretested, structured questionnaire.

Results: In the study 37.2% of respondents were not aware about air/droplet as a route of transmission of TB. Only 10% knew that infective organisms as a common opportunist infection in people with HIV & AIDS. 78.2% of the study population felt that the community will treat them differently if they suffer from TB and total of 57.7% confirmed an attitude of hiding the disease in them.

Conclusions: The overall knowledge about TB in HIV positive individuals is low. Efforts must be made to counsel the patients about TB right in the first counselling session that the patient attends in ART centres so as to prevent spread of TB in the community.

Keywords: TB; HIV; knowledge; awareness.

INTRODUCTION

Tuberculosis (TB) is an infectious bacterial disease that spreads through the air and most commonly affects the lungs (pulmonary TB). Once infected, a person has about a 10% lifetime risk of developing the disease and if left untreated, it will kill half of all patients within 5 years and the majority of these within 18 months¹. For almost 30 years, the epidemics of tuberculosis (TB) and HIV have acted synergistically to produce excess illness and death around the world².

Global estimation of burden of HIV positive incident TB cases is 10,00,000 (11,00,000-12,00,000). Though only 5% of TB patients are HIV infected, in absolute terms it ranks 2nd in the world and accounts for about 10% of the global burden of HIV associated TB. The estimates of HIV prevalence amongst incident TB cases is estimated to be 3.3% (5%-7.1%). While the HIV epidemic in India appears to have peaked, the total number of persons living with HIV/ AIDS remains high, and with time the level of immune deficiency and TB vulnerability may increase²⁻⁴.

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TB is the most common opportunistic infection and cause of mortality among people living with HIV (PLHIV), difficult to diagnose and treat owing to challenges related to co-morbidity, pill burden, co-toxicity and drug Interactions³, but it is a leading preventable cause of death among people living with HIV. Therefore, it is pertinent to determine the knowledge, attitudes and practices regarding TB in HIV positive population; for the quality of life of patients themselves as well as for curbing the transmission of this important opportunistic infection in the community. Keeping background in mind the study was planned to assess the knowledge, attitude and practices regarding TB in HIV positive individuals attending ART centre.

METHODS

A cross sectional study was conducted from Dec 2012 to Feb 2013 in an ART centre of a tertiary care hospital of Western Maharashtra. Sample size was calculated on the basis of awareness level mentioned in previous studies, which came out to be 94 (5% level of significance and 7.5% error of margin). Hence 100 patients were planned to be included in the study. Systematic random sampling was used to collect the data. However, the data could be collected and analysed for 98 subjects only. Pre tested and pre validated questionnaire was used as instrument for the study. SPSS version 20 was used for collating and analysis of data.

RESULTS

It was observed that majority (34.6%) of patients belonged to age group of 31-40 yrs followed by 20-30 yrs (25.6%) and 41-50 yrs (24.4%). 7.7 % study subjects were below 20 yrs of age (Table 1). 61.5% were males and 38.5% were females in this study. Majority of the respondents (92.3%) in the study belonged to Hindu religion while 3.8% each were Christians and Muslims. Mean age of the respondents was found to be 36.21 years in the range of 16 years to 62 years (Table 1)

Table 1. General Demographic Profile of Study Cases (n=98)

Parameters	Number (Percentage)
Age(Years)	
<20	08 (7.7%)
20-30	25 (25.6%)
31-40	34 (34.6%)
41-50	22 (23.1%)
>50	09 (9.0%)
Sex	
Male	60 (61.5%)
Female	38 (38.5%)
Religion	
Hindu	90 (92.4%)
Muslim	04 (3.8%)
Christian	04 (3.8%)

Table 2. Education category in male and female

Education category	Male	Female
	Number (%)	Number(%)
Illiterate	09(14.6%)	10(26.7%)
Primary	08(12.5%)	04(10.0%)
Middle	15(25.0%)	05(13.3%)
Secondary	16(27.1%)	10(26.7%)
intermediate	08(12.5%)	05(13.3%)
Graduate	05(8.3%)	04(10.0%)
Total	60(100%)	38(100%)

Female were more illiterate (26.7%) than male (14.6%). Majority of both male and female were educated up to 10 standards. Very few of them in both male and female were graduated (Table 2).

Table 3. Occupational status in male and female (n=98)

Occupation	Male (%)	Female (%)	Total (%)
Unemployed	07 (12.5)	01 (3.3)	08 (7.8)
Unskilled	06 (10.4)	08 (20)	14 (13.7)
semiskilled	03 (4.2)	00	03 (2.9)
Skilled	20 (33.3)	20 (53.3)	40 (39.2)
Clerical/shop owner	24 (39.6)	09 (23.3)	33 (32.3)
Total	60 (100)	38 (100)	98 (100)

In the study 39.6% males had an occupation as clerk / shop keeper while others were skilled worker (33.3%), unemployed (12.5%) and unskilled (10%) respectively. 10% were unskilled worker. In female 53.3% were skilled workers, 23.3% were clerks / shop keeper and 20% were unskilled worker. In total 39.2% were skilled workers while 32.3% were clerical/ shop keeper. Only 13.7% were skilled workers and 7.8% were unemployed, out of which 92% were males (Table 3).

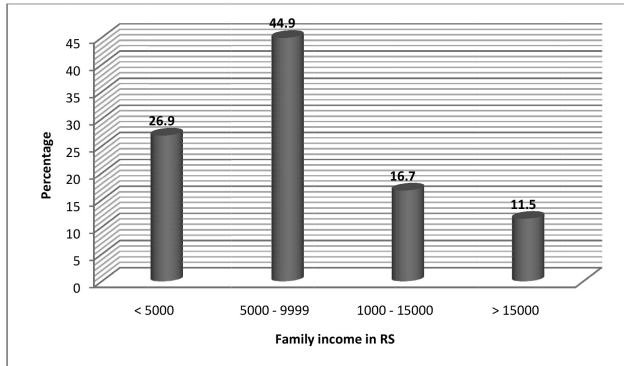


Figure 1. Family Income of Study Cases

In the present study 44.9% of the respondent's family income was between Rs 5000-1000 per month, 26.9% percent respondent's monthly family income was less than 5000 thousand per month and 16.7% of the respondent's income was between Rs 10000-15000 per month and only 11.5% of respondents were earning more than Rs 15000 per month. 64.1% belonged to upper lower socio economic class, 30.8% were from lower middle class and 5.1% were from lower middle class (Figure 1).

Table 4. Information on TB

Information on TB	Percentage
Medical personal	44.9
Friends and relative	16.7
Media (TV, Newspaper, pamphlets)	32.4
Others	6.0

Majority of patients (97.4%) had heard about Tuberculosis. Among them the main source of information was medical personnel (44.9%), about one-fifth of the respondents (24.4%) had about it from

Media (TV, Newspaper, magazine, posters). 16.7% of respondents heard from their friends and relatives and 6.4% from other sources (Table 4).

Table 5. Perception regarding symptoms of TB

Symptoms	Numbers	Percentage
Cough > 2 weeks	80	82.1
Fever	25	25.6
Bloody sputum	19	19.2
Appetite loss	20	20.5
Sweating	01	1.3
Chest pain	10	10.3
Weakness	23	23.1
Wt Loss	14	14.1
Don't know	12	12.8

Overall awareness about symptoms of Tuberculosis was low in study subjects. Though they had heard about TB, 12.8% of them were not aware about any symptoms of TB. 82.1% think that cough more than 2 weeks as a symptom of TB. Only 14.1% knew weight loss can also be symptoms of TB (Table 5)

Total of 75 % Patients were aware that Tuberculosis is a contagious disease. Regarding mode of transmission of disease, 62.8% were aware that it spread via coughing, 14.1% said about sharing food, 6.4% said it spreads through sexual contacts and 1.3% said about hand shake.

Total 82 % patients felt that TB is a curable disease and it will be cured by medication. 79.5% were aware that person suffering from AIDS or infected with HIV are more prone to acquire Tuberculosis infection.

Among study subjects, 24.4% patients had seen Tuberculosis in their relatives/ friend/neighbours. No one among them had any stigma in visiting their homes. But when asked about social stigma, 57.7% told that they will hide diseases from others and majority of them (71.1%) felt that people will avoid them if they suffer from TB whereas 6.7% felt that they will lose their friends if they will come to know about their disease. 19 % felt that it's shameful to acquire

TB in society as they felt that others will avoid them (66.7%) and others (33.3%) felt they will infect this disease to others. Among study subjects 78.2% felt that Tb patients are treated in community differently, among them 73.8% felt that people avoid TB patients and 23% felt that other think that these patients will infect others. It was not so good finding when it came to practice of spitting, as 64 % told they spit wherever they feel it convenient and 34% felt they spit on road.

Table 6. Awareness about prevention of spread (n=98)

Prevention of spread of TB	Frequency	Percent
Covering mouth during coughing/sneezing	49	50.0
By washing hands	01	1.2
Taking regular medication	45	46.2
Others	03	2.6

When it comes to awareness about prevention, 50% felt that covering mouth while sneezing/coughing prevents TB from spreading, 46.2 % felt it can be controlled with help of medication. Another 41% felt that it can be prevented by vaccination (Table 6).

Table 7. Association of Various Socio demographic factors with Knowledge/attitude/ practice regarding Tuberculosis

Socio Demographic Factors	Knowledge (Independent T test, P value)	Attitude (Independent T test, P value)	Practices (Chi Square Test, P value)
Age (<30 &>30 Yrs)	0.649	0.639	0.423
Sex (Male & Female)	0.883	0.867	0.774
Education (Illiterate & Literates)	0.060	0.020	0.122
Occupation (< Skilled &> Skilled worker)	0.404	0.347	0.078
Income (< 10000 &>10000)	0.065	0.564	0.687
SES (<Upper Lower &> Upper Lower)	0.063	0.014	0.273

Knowledge and attitude were converted into score and compared with socio demographic factors using Independent "t" test. Practice was compared using Chi square test. Only attitude regarding various aspects of Tuberculosis shows significant association with

education of the respondents (Table 7).

DISCUSSION

Mean age was 34 years in a study conducted by Jittimane SX et al in Thailand where maximum patients belong to 31-40 year's age group⁵ which is in consistent with our findings where the mean age was found to be 36.2 years and maximum subjects belonged to 31-40 years age group. In another study done by Seyoum A et al in eastern Ethiopia showed that the mean age was 28.6 years and maximum subjects belong to 21-40 years age group⁶.

In Cross sectional study done by Khalil S et al, 61.4% were male and 38.6% were female. Majority of the patients (78.4%) were Hindu while rest 21.6% were Muslims .which is in consistent with our finding that 61.5% is male and 38.5% were female. In the same study regarding the awareness of symptoms, 75% were aware about Cough with sputum as the commonest symptom and 19.3% were not aware of any symptoms of TB⁷. In our study 82.1 percent were aware about cough for 2 weeks as symptoms of TB where as 12.8% didn't know any symptoms of TB.

Study conducted in 5 VDCs of Sindhupalchok District in Nepal regarding KAP on tuberculosis in community revealed that more than 40% of the respondents believed that the infection could be prevented by 'covering mouth and nose while coughing and sneezing'⁸. In our study 50% of the respondents believed that the infection could be prevented by covering the mouth and nose while coughing. In the same study majority of respondents (81.2%) perceived that most people in the community feel ashamed after they are infected with TB. In our study 78.2% said that community will treat them differently.

Although most of them were aware about cough for 2 weeks as a symptom of TB but very few had knowledge of other symptoms like fever, weight loss, loss of appetite as a co-symptom of TB, so therefore IEC should be done regarding knowledge of TB in ART centre in first visit. Attitude towards the disease is still poor in general community and also stigma in

society still persist in significant number of population. Measures to reduce stigma in society should be taken. More emphasis should be given in the form of education campaign to reduce stigma in the community.

CONCLUSIONS

Majority of subjects were aware about Cough as main symptom of TB but a significant number of patients were not aware about any symptom. 2/3rd patients were aware about modes of transmission of TB. 82 % had faith in treatment and felt that it will cure the disease. Stigma still persist in the society, about half of study subjects wanted to hide their disease due to social stigma. People still feel shameful to have TB. Half the patients felt that TB can be prevented by vaccination.

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