Original Article

Knowledge of causative agent of tuberculosis among TB patients in Jaipur district (Rajasthan)

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ABSTRACT

Background: Tuberculosis is known since ages and its causative agent was discovered eight to nine decades ago and still misconception is present regarding its cause in India. India is facing TB epidemic at present.

Objective: To assess the knowledge of Tuberculosis in patients regarding causative agent of the disease.

Results: Total 300 TB patients participated in the study, 75% were male and 25% were female, 60% were married and 25% were unmarried 15% were widow or widower, 77% were Hindu and 22% were Muslims, 49% were literate and 51%were illiterate, 59% patients belonged to social class IV. 56% of patients knew the causative organism, 72% of the female don't know the causative agent. 71% to 73% literate patients knew about the causative agent. Evil eye (56%), past sins (52%) was main myths as cause of TB. Lower socio economic class had more myths about the causative agent (23% in class IV) (58% in class V).

Conclusion: In poor country like India emphasis must be paid regarding awareness of tuberculosis among poor and low socioeconomic group people and patient.

Keywords: Tuberculosis, Knowledge, Myth

Introduction:

Tuberculosis kills more people in economically productive age group greater than any other infectious disease worldwide. Tuberculosis alone kills more people than malaria and AIDS combined. Women death due to maternal mortality lies second to tuberculosis; such is the magnitude of problem worldwide. Tuberculosis is turning out to be greatest epidemic of this century, so great is the concern about tuberculosis epidemic. The problem of tuberculosis is acute in developing countries which accounts for three fourth of cases in the world. The impact of tuberculosis is greatest on poor 99.00% of deaths and 95.00% of all cases occurring in developing and poor countries. The majority of people affected by tuberculosis are in economically active age group. Tuberculosis and poverty go hand in hand people who are poor get tuberculosis and people who get tuberculosis become poor [1].

In developing countries still lot number of tuberculosis patients goes undiagnosed. There has been over all increase in absolute number of tuberculosis cases during last 30 years because of population explosion during this period [2]. Tuberculosis is the oldest known disease to mankind and is caused by mycobacterium tuberculosis. The causative organism was discovered long back but myths regarding cause of tuberculosis are still prevalent not only in general population but also among the TB patients.

Aims and objectives

The present study aims to study knowledge of TB cases regarding causative agent of tuberculosis and myths related to its causation.

Material and methods

Period of study: Survey was conducted from 1st January 2013 to 30th Dec, 2013 for a period of 1 year.

Sampling units: Study was conducted on the tuberculosis patients of the Jaipur treatment unit at DTC and at 20 DOTS centres.

Area of study: The present study was conducted as District tuberculosis centre and randomly selected DOT centres of Jaipur treatment unit. Patients attending DTC and DOT's centre to which they belonged to.

Sampling Technique: During the period of study a total of 173 TB patients were registered for treatment at District TB centre Jaipur of which 167 were included in the study while 6 refused to participate in the study.

Tuberculosis Unit (TU) - Jaipur: At the time of study had 415 DOT's providers of which 5% i.e. every 20th DOT's provider was include for study by using systemic random sampling technique i.e. choosing every 20th DOT's provider from the available list. Thus this figure came to be 20 DOT's provider out of 415. During the period of study 133 TB patients were taking treatment from these 20 DOTS provider and these 133 patients were taken up for the study. Thus the total sample size came to be 167+133 = 300 (167 form DTC and 133 from DOTs provider).

Technique used: The study was conducted by taking interview of TB patients attending DTC and DOT's centre. Data were collected in pre designed and pre tested proforma. All the details of TB patients, which included socio-demographic and clinical profile of the patient such as age, sex, marital status, religion, education, occupation, socio-economic condition etc. Clinical profile consisted of symptoms of tuberculosis, past history, family history, diet, bowel habits BCG vaccination etc. Environmental factors such as type of housing were also taken in account. Revised B G Prasad classification was used to determine the social class of the tuberculosis patient in the present study. Knowledge of the causative agent of tuberculosis patients regarding their disease and myths regarding causation was studied in pre tested proforma.

Observations

Table shows 75% of TB patients are male and 25% female. Most of the cases are in age group 15-39 yrs i.e. 63.9%. Married constitutes about 60% of the cases and among illiterate 48.67%. TB is more common among labourers.

Table 1: Socio-demographic characteristics of TB patients

Characteristics	Number (%) n= 300 (100%)
Sex	
male	225 (75.00)
female	75 (25.00)
Age (in years)	
≤14	06 (02.00)
15-29	110 (36.60)
30-39	82 (27.30)
40-49	44 (14.60)
50-59	38 (12.67)
60+	20 (06.60)
Marital status	
married	182(60.66)
unmarried	74(24.67)
widow/widower	44(14.67)
Educational status	
illiterate	146(48.67)
primary	72(24.00)
secondary	52(17.33)
sr.secondary	23(07.67)
graduate	07(02.33)
Occupation	
agriculture	34(11.33)
labour	120(40.00)
govt	08(02.67)
self-employed	71(23.67)
housewife	50(16.67)
others	17(05.67)

Table 2: Observation showing cases distribution according to Social class & area of residence

Social Class	Urban		Urban Slum		Rural		Total	
	No.	%	No	%	No	%	No	%
I	00	0.00	02	01.27	00	0000	02	0.66
II	01	1.00	21	13.29	04	09.52	26	8.67
III	10	10.00	20	12.66	08	19.05	38	12.67
IV	17	17.00	31	19.62	10	23.81	58	19.33
V	72	72.00	84	53.16	20	47.62	176	58.67
Total	100	100	158	100	42	100	300	100

Table 2 indicates that 258 (86%) patients belong to urban and urban slum in this study.

Table 3: Distribution of cases according to the knowledge of causative organism

Causative Organism	Male		Female		Total	
	No.	%	No	%	No	%
Knows	146	64.89	21	28.00	67	55.67
Don't Know	79	35.11	54	72.00	133	44.33
Total	225	100	75	100	300	100.00

$\chi2 = 28.72$ df = 1 p<0.001

Table shows that 55.67% had knowledge about causative organism. 64.89% of males and 28.00% of females had knowledge about causative organism. 44.33% cases had no knowledge about causative organism 72.00% female and 35.11% males had no knowledge about causative organism. The difference was statistically significant.

Table 4: Correlation between awareness about TB causative organisms and literacy

Literacy Status	Present		Absent		Total	
	No.	%	No	%	No	%
Illiterate	83	56.84	63	43.16	146	100
Primary	25	34.72	47	65.28	72	100
Secondary	31	59.61	21	40.39	52	100
Sr.Secondary	17	73.91	06	26.09	23	100
Graduate	05	71.42	02	28.58	07	100
Total	161	53.67	139	46.33	300	100

$\chi^2 = 16.41$, df = 4, p < 0.001

Observation in this table shows that 73.91% and 71.42% of TB cases with literacy status of sr. secondary and graduate respectively knew about causative agent. 34.72% and 59.61% of cases who were primary and secondary educated knew about causative organism. Knowledge about causative organism among illiterate was found to be 56.84%. The difference was statistically significant.

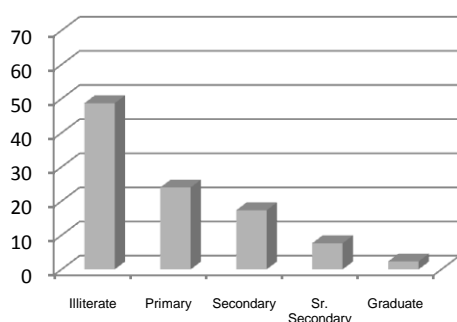Fig. 1: Distribution of TB cases as per literacy status

Table 5: Observation showing myths among tuberculosis cases

Myth about disease	Present		Absent		Total	
	No.	%	No	%	No	%
Punishment from God	140	46.66	160	53.34	300	100
Curse	127	42.33	173	57.67	300	100
Ghost intrusion	93	31.00	207	69.00	300	100
Past sins	156	52.00	144	48.00	300	100
Evil eye	170	56.66	130	43.34	300	100

Table shows that 56.66% of the respondents stated evil eye, 52.00% of the respondents considered past sins as the cause of tuberculosis. Respondents gave multiple response regarding myths about tuberculosis cause.

Table 6: Observation showing myth about disease in relation to social class

Myth about disease	Yes		No		Total	
	No.	%	No	%	No	%
Social Class I	00	00	02	1.5	02	0.67
Social Class II	14	8.38	12	9.02	26	8.67
Social Class III	17	10.18	21	15.79	38	12.67
Social Class IV	39	23.35	19	14.29	58	19.33
Social Class V	97	58.08	79	59.40	176	58.67
Total	161	100	139	100	300	100

$\chi2 = 7.56$, df = 4, p > 0.05

Observation in this table shows that 53.67% cases had myth about disease as the social class rose the percentage of cases with myth declined. It was 8.75% in social class II, while it was 23.35% and 58.08% in social class IV and V. The difference was statistically non significant.

DISCUSSION

Present study is an attempt to explore various socio-demographic factors and knowledge of TB patients regarding the causative agent of the disease; factors like personal habits were not taken. Study was carried out in 300 patients of tuberculosis attending DTC and DOTS provider. Age break-up of 300 patients revealed that maximum number of them i.e.36.60%

belonged to age-group of 15-29 yrs followed by 27.30%in the age group of 30-39yrs. The observation suggests that about 2/3rd of the patients belonged to active age group for earning and productivity. Mohamed A [3] in his study found 60.8% of respondents belonged to age group 20-39 years. 75.00% of the patients were male and 25.00% female. Male and female ratio being 3:1. Godhi SA [4] also found prevalence of tuberculosis three times higher in males than in female. Chaterjee [5] also found about three quarter of patients being male and one quarter being female. Of the total 300 patients one third i.e. 33.34% were from urban area and more than half (52.60%) were from urban slums. 14.00% of the patients were from rural areas. Chaddha SL and Bhagi RP [6] also found maximum patients belonging to urban slums (47.70% and 44.00% respectively). 77.00% of the patients were Hindus & 22.33% Muslim. Godhi SA [4] and Laring R D (1995) [7] found higher number of Muslim patient i.e. 32.80% and 35.60% respectively. Observation from literacy status of tuberculosis cases indicate that about half 48.60% were illiterate another 24.00% were literate upto primary level. Only 27.33% of patients were literate upto secondary level or above. Chaddha SL and Bhagi RP [6], Godhi SA [4] also found that maximum numbers of patients to be illiterates (39.00%, 58.60% and 58.30% respectively). Damor D, Singh MP (2012) [16] in their study found that 31.9% of the respondents were illiterate. Only two third of patients i.e 65.67% knew about the causative organism. No correlation between awareness of causative agent and literacy status was found. In study by Bansal AK [8], 78.00 % of patients knew about causative organism. Damor D and Singh MP [9] in their study found only 6.9% of the cases knew the cause of disease. Khan A., Mobeen N [10] in his study found that 39% of the cases knew germ as the cause of disease. Various myths related to T B prevalent in tuberculosis patients were ; Punishment from God (40.66%) , Curse (42.33%) , Past sins (52.00%) , Evil eye (55.66%) , Ghost Intrusion (31.00%). Myths were prevalent more frequently in lower social class cases then upper class. Khan JA, IrfanM, Zaki A, Beg M, Rizvi N [11] also found that 50% of the respondents had myths regarding the cause of tuberculosis. Observation on correlation between knowledge of duration of treatment and literacy status reveal a positive correlation i.e higher the literacy higher the knowledge .It was 42.20% in illiterate while it was 85.71% in graduate.

SUMMARY AND CONCLUSION

- 63.90% ie.2/3rd of the patients belonged to active age-group i.e. 15-39 yrs. This is age for earning and productivity
- 75.00% of patients were male and 25.00% were female. Male female ratio being 3:1
- 1/3rd of patients belonged to urban area. More than half (52.60%) from urban slums and 14.00% of rural areas.
- About 60.00% of patients were married and 40.00% were either unmarried, widow and widower.
- 77.00% of patients were Hindu, 22.33% were Muslims and rest belong to other religion.
- Maximum number of patients was labourers (40.00%) followed by self employed (23.67%), 18.67% were housewives.
- Literacy status of sample was 51.40%
- 2/3rd of the patients belonged to nuclear family
- Majority of the patients ie. 78.00% were from lower socio economic classes.
- Only 2/3rd of the patients i.e. 65.67% knew about the causative organism and literacy status was found.
- Myths regarding causation of TB were widely prevalent especially in lower class than upper class which were; punishment from God (40.66%), curse (42.33%), past sins (52.00%), evil eye (55.66%) and ghost intrusion (31.00%) indicating the need of creating awareness in patients in particular and community in general.

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