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Socio-Demographic and Clinical Pattern of Tuberculosis Patients of Mahakaushal Area of Central India

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ABSTRACT

Tuberculosis (TB) is a chronic infectious disease. India has one third of global TB burden. The most important symptoms are cough; sputum production; weight loss while others are haemoptysis, fever, night sweats, tiredness, loss of appetite, secondary amenorrhoea etc. Across sectional, observational aimed to find out socio-clinical pattern of patients of tuberculosis treated by private practitioners. Eighty-two patients were registered. Most of the patients were in age group of 21-40 years. 65.85% (n=54) patients were males and 35.15% (n=28) were females. Most common symptom was cough. Patients were from mostly low socioeconomic-status.

KEYWORDS socio-demographic and clinical pattern, tuberculosis

INTRODUCTION

Tuberculosis (TB) is a chronic infectious disease.[1] TB has continued to remain a major global health problem.[2] Though India is the second-most populous country in the world, one third of the global TB cases occur in India annually. In 2012, out of the estimated global annual incidence of 8.6 million TB cases, 2.3 million were estimated to have occurred in India.[3]

The most important symptoms in the diagnosis of PTB are cough for more than 2 or 3 weeks; sputum production; weight loss. While sputum smear microscopy for Acid Fast Bacilli is diagnostic. Over 90% of patients with sputum smear-positive PTB develop a cough soon after disease onset. However, cough is not specific to PTB. Patients with PTB may also have other symptoms. These may be respiratory (chest pain, haemoptysis, breathlessness) or constitutional (fever, night sweats, tiredness, loss of appetite, secondary amenorrhoea).[4] Though a significant variation in socio-demographic and clinical presentation is often seen.

Private sector is important source of health care services. Almost all urban residents are within easy walking distance of a private clinic and so are many rural Indians. Contrary to common perception, the poor utilize private health services almost as much as the better-off groups. [5]

MATERIALS AND METHOD

It was a cross sectional, observational study was jointly conducted in the Department of Pharmacology and Department of Pulmonary and Sleep Medicine, NSCB medical college, Jabalpur, from October 2014 to September 2015 with an aim to find out socio-clinical pattern of patients of tuberculosis treated by private practitioners.

All patients attending the Department of Pulmonary and Sleep Medicine OPD and admitted in the ward, who were found to have been treated by Qualified, Registered private medical practitioner of Mahakaushal area, was included in the study after informed written consent. Patients who did not give informed, not able to communicate properly, treated by non qualified, general practitioner of indigenous system of medicine and consultants of department of pulmonary and sleep medicine, NSCB medical college.

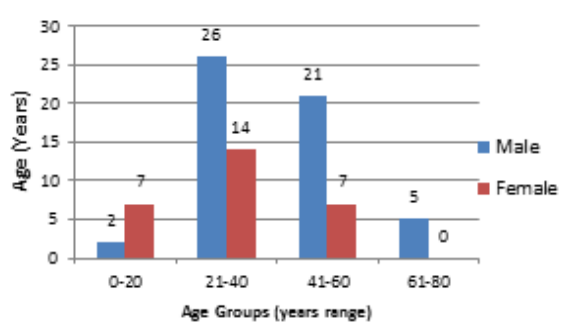
Detailed history of the patient was taken and clinical examination done and relevant demographic and clinical data was also collected by receiving previous prescription of private practitioner.

OBSERVATION AND RESULTS

A total of 82 patients were registered. Most number of patients consulted between 1 to 2 month duration of symptoms, (n=56, 68.29%). Most of the patients were young adults in the age group of 21-40 years. None of the patients were from paediatric age group (Figure-1). Among all patients 65.85% (n=54) were males and 35.15% (n=28) were females (Figure–1).

Weight loss was the most common clinical presentation, complained by 90.24% (n=74) patients followed by cough, Fever, Night sweats and Sputum (Table - 1). Most of the patients presented with all key symptoms- cough, fever, night sweats, weight loss and Sputum, constituted 52.44% (n=43) patents. Constellation of four symptoms was present in 13.41% (n =11) patients. Only 18.29% (n=15) presented with single symptom, where 13.41% (n=11) only with weight loss, 3.66% (n=3) only with cough and fever was solitary symptom in 1.22% (n=1) patients.

Graph– 1
Showing age-wise distribution of Male and Female patients



Patients presented with any of three key complains were 10.98% (n=9). Only 4.88% (n=4) patients presented with constellation of two symptoms.

As far as occupation is concerned 64.63% (n=53) patients, were non-skilled workers while 35.37% (n=29) were skilled workers. Out of total 82 patients, 32.93% (n=27) were illiterate and 67.07% (n=55) were literate.

Table – 1
Showing pattern of Clinical presentation (complaint)

S. No.	Single-Complaints	Number of Patient	Percent (%)
1	Cough	65	79.27
2	Fever	64	78.05
3	Night sweating	56	68.29
4	Weight loss	74	90.24
5	Expectoration	50	60.98

A significant proportion of patients were smokers (46.43%) and alcoholics (34.15%) and belongs to lower class (74.39%) of socioeconomic strata while non from high socioeconomic status (Table - 2).

Table – 2
Showing patient profile according to personal history

S. No.	Status		Number of Patients (N=82)	Percent (%)
1	Smoking	Non Smoker	44	53.66
		Smoker	38	46.34
2	Alcoholic	Non Alcoholic	54	65.85
		Alcoholic	28	34.15
3	Socio-economic status	Lower	61	74.39
		Middle	21	25.61
		Upper	0	0

Among 20 (24.39%) patients most common site of extra pulmonary involvement was Lymph nodes, present in 10.98% (n=9) patients followed by Pleura 6.10% (n=5) and Bone 3.66% (n=3) involvement. In 3 patients (3.66%) other sites were involved.

None of the patients were found to have involvement of Nasal septum, Skin and Genitourinary system.

Patients were screened for 7 investigation and laboratory parameters. Only 3 investigations, X-ray was performed in 96.34% (n=79) patents followed by Sputum test in 52.44% (n=43) and AFB culture in 8.54% (n=7) patients. None of the patients were done PCR, Gene expert, Gamma interferon or ELISA.

DISCUSSION

Most of the patients in present study were young adults in the age group of 21-40 years (48.78%, n=40). In a study **Sexena et al (1987)** found maximum number of patients were in the age group 35-40 years[6], while in a study by **Kingsy et al (1998-2008)** the 25–34 years age groups had the highest smear-positive notification rates.[7] These results are comparable to findings in present study. Adults are the most productive age group (15-54 year) which is affected.[8]

Among all patients, 65.85% (n=54) were males and 35.15% (n=28) were females. A higher female:male ratio is seen in younger age group (0-20 years), while other age groups 21 to 80 showed ratio skewed towards male sex. Our study result is similar to other study. **Sexena et al (1987)** found an even higher male ratio with 85.71% patients was being males.[6] **Bhargava *et al* (2014)** reported comparable results where male 64.67% and female 35.33% were reported.[9] Among all patients 66.67% about (2/3) of the cases are male.[8]

As far as personal and socioeconomic profile is concern in present study, a large proportion of patients were smokers (46.34%, n=38), Alcoholic about 34.15% (n=28) and most of the patients were from lower socioeconomic status with 74.39% (n=61). It is well known fact that lower socioeconomic status is a risk factor for acquiring TB infection and delay in starting treatment as suggested by **Pantoja *et al* (2009)**. [10] People with lower socioeconomic have a higher likelihood of being exposed to crowded, less ventilated places and have limited safe cooking practicing facilities.[11] In a study of association between TB and smoking, **Roya *et al* (2012)** established that smokers were more frequent in TB patients against control.[12] Alcohol has been recognized as a strong risk factor for TB disease.[13] A meta-analysis of molecular epidemiological studies by **Fok *et al* (2008)** has established alcohol as a risk factor for clustering in both high- and low-incidence countries. [14]

Mainly six sites were examined for extra pulmonary infection in the study and a total of 24.39% (n=20). In a study by **Dhingra *et al* (2008)** extra pulmonary involvement was found to be 12.5% among 24 tubercular patients, [15] which is lower than our results. The difference may be due to chronically different groups of patients in two studies.

Patients were screened for 7 investigation and laboratory parameters. Only 3 investigations namely, X-ray was performed in 96.34% (n=79) patents followed by Sputum test in 52.44% (n=43) and AFB culture in 8.54% (n=7) patients. None of the prescribed investigation for finding possible drug resistance was done e.g. PCR, Gene expert, Gamma interferon or ELISA before making decision. A comparable result on sputum examination was observed by **Basu *et al* (2013)**, only half (51.6%) of the private practitioners as primary tool of diagnosis.[16]

In clinical presentation in present study weight loss (90.24%, n=74) was most common symptom, followed by cough (79.27%, n=65), Fever (78.05%,n=64), Night sweats (68.29%, n=56) and Sputum (60.98%, n=50). **Baxi *et al* (2006)** reported cough in 88.88%, weight loss in 84.44% and **Allan *et al* (1979)** reported cough in 82%, sputum in 15%. Different studies shows different pattern of clinical presentation but cough and weight loss being the most common of the symptoms.[17,18]

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