

Research Article

A STUDY OF CLINICAL AND DEMOGRAPHIC PROFILE OF PATIENTS AFFECTED WITH TUBERCULOSIS

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Abstract

**Background:** Tuberculosis is an infectious disease caused by Mycobacterium Tuberculosis primarily affects lungs. Other organ systems can also be affected when it is known as extra-pulmonary tuberculosis. **Aim:** Present study was conducted with the objective to study the demographic and clinical profile of tuberculosis patients of age  $\geq 10$  years. **Methodology:** This descriptive study was conducted in a sub district hospital of Jammu region of north India. All the patients who were diagnosed with tuberculosis in our center with age  $\geq 10$  years from 2018 to 2020 were included in the study. Data recorded was age, sex, body mass index and socioeconomic status of the patients and site of tubercular disease was collected. Socioeconomic status was estimated as per modified kuppuswamy scale. **Results:** Mean age of cases was  $45.18 \pm 20.28$ . Number of males were 56 and females were 29. Male female ratio was 1.9:1. Number of cases with pulmonary tuberculosis were 58(68.24%) and extra-pulmonary cases were 27(31.76%). Among extra-pulmonary TB cases, 15 were having pleural TB(55.56%), 6(22.22%) were having lymph node TB, 3(11.11%) had abdominal TB, 2(7.41%) were having miliary TB and 1(3.7%) patient had spinal TB. 5(5.9%) patients belonged to lower middle class, 10(11.7%) belonged to upper lower class while 70(82.35%) patents fell down in lower class socioeconomic status as per modified kuppuswamy scale. **Conclusion:** In our study, there was male predominance among cases of tuberculosis. Most of the cases were among productive age groups. Most common presentation of extra pulmonary TB was pleural effusion. Most of the patients belonged to lower socioeconomic status.

**Keywords:** Clinical profile, Demographic profile, Pulmonary tuberculosis, Extra pulmonary tuberculosis.

INTRODUCTION

Tuberculosis is an infectious disease caused by Mycobacterium which primarily affects lungs (1,2). Other organ systems can also be affected when it is known as extra-pulmonary tuberculosis which is rarely smear positive. Extra-pulmonary tuberculosis has never been a priority in the campaigns undertaken by national TB control programmes as it is very less communicable (3,4). Most common site for extra-pulmonary tuberculosis is lymph nodes followed by pleura (5). According to WHO Global TB report 2015, tuberculosis accounts for 9.6 million cases globally. In India 1.2 million cases of tuberculosis arise annually (6-9). It is estimated that 40% of Indian population is infected with TB bacteria, the vast majority of whom have latent TB rather than TB disease (10). Among the factors that decide the conversion of latent TB to TB disease, host factors play the most important role. Immunity is the most important factor which depends on age and genetic factors (11). The current adoption of end TB strategy has a vision of world free of TB and with the goal to end TB epidemic (12). Therefore it is important to know the risk factors related to TB and clinical profile of tuberculosis patients for the prevention and early diagnosis of TB disease. Present study was conducted with the objective to study the demographic and clinical profile of tuberculosis patients of age  $\geq 10$  years.

METHODOLOGY

This descriptive study was conducted in a sub district hospital of Jammu region of north India.

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All patients who were diagnosed with tuberculosis in our center with age  $\geq 10$  years from 2018 to 2020 were included in the study. Data recorded was age, sex and socioeconomic status of the patients and site of tubercular disease was collected. Socioeconomic status was estimated as per modified kuppuswamy scale.

Statistical analysis

The presentation of categorical variables was done in the form of number and percentage (%). Quantitative data were presented as mean  $\pm$  SD. The association of the variables which were qualitative in nature were analysed using Fisher's exact test. The data entry was done in the MICROSOFT EXCEL spreadsheet and the final analysis was done with the use of SPSS software, IBM manufacturer, Chicago, USA, ver 25.0. P- value of less than 0.05 was considered statistically significant.

RESULTS

Age distribution of patients is given in table 1. Mean age was  $45.18 \pm 20.28$ . Number of males were 56 and females were 29. Male female ratio was 1.9:1. Number of cases with pulmonary tuberculosis were 58(68.24%) and extra-pulmonary cases were 27(31.76%). Among extra-pulmonary TB cases, 15 were having pleural TB(55.56%), 6(22.22%) were having lymph node TB, 3(11.11%) had abdominal TB, 2(7.41%) were having miliary TB and 1(3.7%) patient had spinal TB. 5(5.9%) patients belonged to lower middle class, 10(11.7%) belonged to upper lower class while 70(82.35%) patents fell down in lower class socioeconomic status as per modified kuppuswamy scale.

**Table 1. Distribution of age(years) among study subjects**

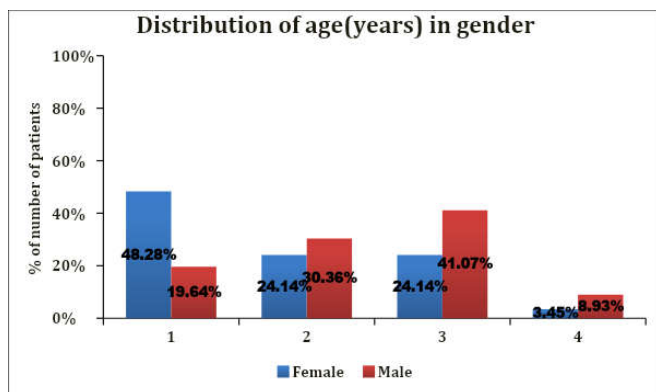
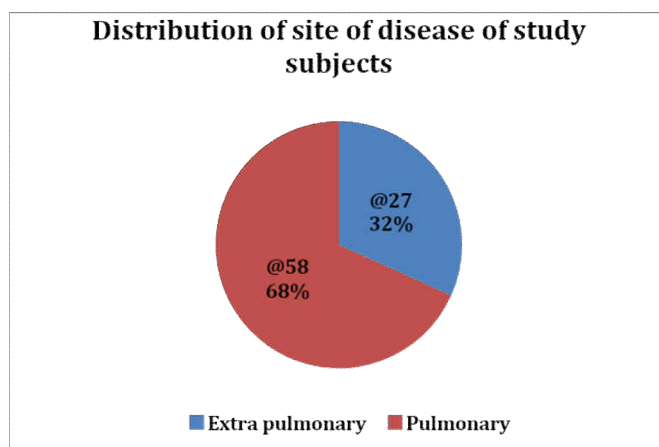
Age(years)	Female(n=29)	Male(n=56)	Total
10-30	14 (48.28%)	11 (19.64%)	25 (29.41%)
31-50	7 (24.14%)	17 (30.36%)	24 (28.24%)
51-70	7 (24.14%)	23 (41.07%)	30 (35.29%)
71-90	1 (3.45%)	5 (8.93%)	6 (7.06%)
Mean $\pm$ SD	37.86 $\pm$ 19.91	48.96 $\pm$ 19.58	45.18 $\pm$ 20.28

**Table 2. Distribution of extra pulmonary site of study subjects**

Extra pulmonary site	Frequency	Percentage
Abdominal	3	11.11%
Lymph node	6	22.22%
Pleural	15	55.56%
miliary	2	7.41%
spine	1	3.70%
Total	27	100.00%

**Table 3. Distribution of socio economic status of study subjects**

Socio economic status	Frequency	Percentage
Lower middle	5	5.88%
Upper Lower	10	11.70%
Lower	70	82.35%
Total	85	100.00%

**Figure 1. Distribution of age(years) in gender****Figure 2. Distribution of site of disease of study subjects**

## DISCUSSION

Present study included 85 cases, with 56 males and 29 females. Male female ration was 1.9:1. In study conducted by Bilagi et al and Gupta S et al, there was also male predominance (5,17). These findings could be due to the fact that exposure to

pollution and minute dust is more among males than females barring indoor air pollution (14,15). Mean age of cases in present study was 45.18 $\pm$ 20.28. There was almost equal distribution of cases in age groups 10-30,31-50 and 51-70 years whereas there were least number of patients in age group of 71-90 years. In study conducted by Bilagi et al, maximum number of patients were in age group of 21-30. Some studies showed bimodal peak in pulmonary TB cases during 15-25 years and 60-70 years (18). In present study, among cases of extra pulmonary TB most common presentation was pleural effusion(55.46%), followed by lymph node TB(22.22%), Abdominal TB(11.11%) miliary TB(7.41%) and Pott spine (3.7%). Similarly, in study conducted by Bilagi et al, most common type of extra pulmonary TB was pleural effusion. In some other studies, there were higher percentage of lymph node TB (18-22). In present study, 70% of cases belonged to lower socioeconomic status. Similar results were seen in study conducted by Dheeraj *et al.* and Awachana *et al.* (16,17).

## Conclusion

In our study, there was male predominance among cases of tuberculosis. Most of the cases were among productive age groups. Most common presentation of extra pulmonary TB was pleural effusion. Most of the patients belonged to lower socio economic status.

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