

DEMOGRAPHIC PROFILE OF PATIENTS WITH GASTROINTESTINAL TUBERCULOSIS PRESENTING TO A TERTIARY CARE CENTER IN KUMAON REGION OF UTTARAKHAND

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Abstract

Background: Gastrointestinal tuberculosis is one of the most frequent site for the extra pulmonary involvement and it can involve any part of the gastrointestinal tract, peritoneum and hepatobiliary system. It constitutes a major public health problem in developing countries as it is associated with significant morbidity and mortality.

Aims & Objectives: To study the demographic profile of patients of gastrointestinal tuberculosis presenting to a tertiary care center in Kumaon region of Uttarakhand. **Materials and Methods:** This cross-sectional study was conducted on 150 patients of abdominal tuberculosis, greater than 16 years of age, presenting in the Department of General Medicine of Government Medical College and Hospital, Haldwani. The criteria for inclusion of cases was on the basis of history of abdominal pain, clinical examination, biochemical examination and ultrasonographic findings of abdominal tuberculosis and their demographic profile was reviewed such as age, gender, socio economic status, educational qualification, occupation. **Result:** The most common age group of predilection was 39.97 ± 12.97 years, with the male predominance, mainly in the lower socio economic status and the intermediate level of education and affecting predominantly the occupation of housewife and unskilled workers.

Conclusion: This study highlighted demographic presentation of gastrointestinal tuberculosis in this region. Further studies with larger sample size are required to substantiate the findings.

INTRODUCTION

Extra-pulmonary tuberculosis accounts for about 12% of all tuberculosis cases, of which gastrointestinal tuberculosis accounts for 11% to 16% of the cases. It thus makes up 1% to 3% of all tuberculosis cases. 6% to 38% of patients with intra-abdominal tuberculosis may have concomitant pulmonary TB as well.^[1] Abdominal tuberculosis is the sixth most frequent site for the extra pulmonary involvement and it can involve any part of the gastrointestinal tract, peritoneum and hepatobiliary system. It constitutes a major public health problem in developing countries and associated with significant morbidity and mortality.^[2,3]

Gastrointestinal tuberculosis poses a diagnostic challenge as it typically presents with non-specific clinical and radiologic features. The diagnosis is often delayed due to its vague presentation resulting

in various complications. This study was planned and conducted in Government Medical College and associated Dr. Susheela Tiwari Government Hospital, Haldwani to study demographic profile of patients with gastrointestinal tuberculosis.

MATERIALS AND METHODS

This was a observational, cross-sectional single centre study conducted on 150 patients of gastrointestinal tuberculosis presenting in the Department of General Medicine of Government Medical College and Hospital, Haldwani. Data of all patients who were diagnosed between January 2021 to September 2022 were taken. The study was approved by institutional ethical committee with informed patient consent was obtained from each study participant. Patient age >16 years and all patients with gastrointestinal tuberculosis admitting

through outpatient or emergency in the Department of Medicine and Surgery were included and their demographic profile was reviewed such as age, gender, socio economic status, educational qualification, occupation.

Exclusion Criteria

- Patients having age less than 16 years.
- Patients unwilling to participate in the study.

All data was tabulated and subjected to appropriate statistical analysis.

RESULTS

The socio-demographic profile of patients with abdominal tuberculosis is depicted in the table below.

Table 1: Distribution of Study Participants Based on age group

Socio-Demographic Profile		NUMBER	PERCENTAGE
Age Group (Years)	<20	13	8.7%
	21-30	26	17.3%
	31-40	38	25.3%
	41-50	43	28.7%
	51-60	23	15.3%
	>60	7	4.7%

Table 2: Distribution of Study Participants Based on gender

Gender	Male	84	56%
	Female	66	44%

Table 3: Distribution of patients according to socioeconomic status

Socio-Economic Status	Upper Class	0	0%
	Upper Middle	7	4.7%
	Upper Lower	28	18.7%
	Lower Middle	48	32.0%
	Lower	67	44.6%

Table 4: Table showing distribution of patients according to educational qualification

Educational Qualification	High School	9	6.0%
	Graduate And Above	18	12.0%
	Primary School	26	17.3%
	Middle School	28	18.7%
	Illiterate	32	21.3%
	Intermediate	37	24.7%

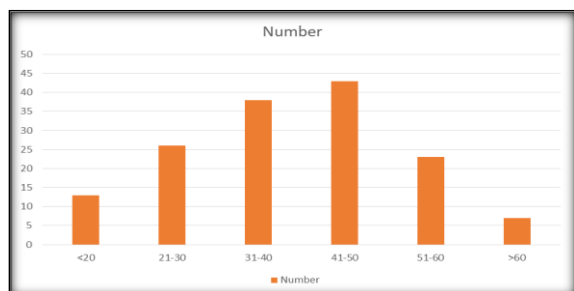


Figure 1: Distribution of Study Participants Based on age group

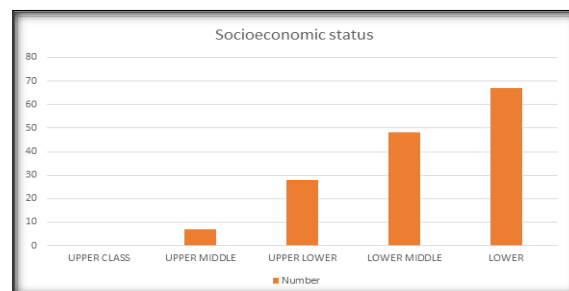


Figure 3: Chart showing distribution of patients according to socio economic status

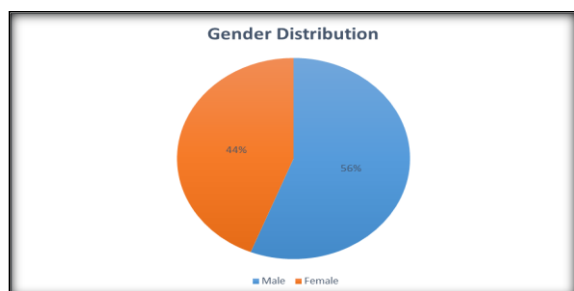


Figure 2: Distribution of Study Participants Based on gender

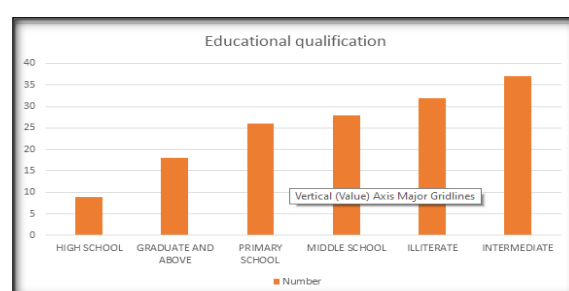


Figure 4: Chart showing distribution of patients according to educational qualification

The majority (28.7%) of study participants belonged to age group of 41-50 years, followed by 25.3% participants in age group 31-40 years, 17.3% in age group 21-30 years and 15.3% in 51-60 years. 8.7% participants were below 20 years of age and 4.7% were greater than 60 years of age. The mean age of study participants was 39.97 ± 12.97 years.

The study population showed male predominance, comprising of 56% males and 44% females. On categorizing the study population based upon the socioeconomic status, we observed that 44.6% participants belonged to lower class, 32% to lower middle class, 18.7% to upper lower class and remaining 4.7% to upper middle class.

Majority of study participants (24.7%) in the present study had completed intermediate education. Primary schooling, middle schooling and high schooling were completed by 17.3%, 18.7% and 6% participants respectively. 12% participants were graduate and above. Remaining 21.3% were illiterate. 29.3% were housewives, 24% were unskilled workers and 14.7% were skilled workers. There were 10.7% students, 8.6% professionals, 4.7% self-employed and 8% unemployed participants

DISCUSSION

In our study the mean age for prevalence of gastrointestinal tuberculosis was 39.97 ± 12.97 years. Similarly, the mean age was 30.01 ± 11.7 years in study by Mavila R et al,^[4] 34.6 years in study by Kentley J et al,^[5] and 37.0 ± 13.59 years in study by Rao TMV et al.^[6] Krishnaswamy J et al,^[7] and Rao TMV et al,^[6] observed that the average age of presentation was between 21 and 40 years.

The study showed male predominance. The study population comprised of 56% males and 44% females. Chen HL et al,^[8] and Miah AR et al,^[9] also reported male predominance in their study. Males constituted 60% and females constituted 40% of total patients in study by Kumar R et al.^[10] Calin R et al,^[11] also reported higher percentage of males in their study (56.2%). The higher incidence in males can be attributed to health-related behaviours such as smoking and drinking, and exposure to psychosocial stressors like discrimination, and violence. In our study gastrointestinal tuberculosis was most prevalent in patients with lower socioeconomic status (44.6%) followed by lower middle (32.0%) as pulmonary TB is also more common in this group, chances of gastrointestinal TB are also higher in this group which could be attributed to high requirement of nutrition which is not met by low socioeconomic individuals leading to malnutrition and decreased immunity and hence making them susceptible to TB infection. Majority of study participants (24.7%) in

the present study had completed intermediate education followed by 21.3% were illiterate. In a study done by Keena et al.^[11] in which abdominal tuberculosis was found to be found in 37.1 % of the cases.

CONCLUSION

Abdominal tuberculosis is one of the common extrapulmonary tubercular infections. The diagnosis of abdominal tuberculosis is often delayed. To diagnose abdominal tuberculosis, high degree of suspicion is needed, and its incidence being common in people with lower socioeconomic status and history of pulmonary tuberculosis. This study gives a basic outline of demographic presentation of gastrointestinal tuberculosis in Kumaon region of Uttarakhand. However, further studies with larger sample size are required to substantiate the findings of this study.

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