

Demographic Profile of Patients Presenting with Cervical Lymphadenopathy: A Cross-sectional Study

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Abstract

Background: Tuberculosis (TB) is one of the major public health problems, being the ninth leading cause of death. Extra pulmonary TB (EPTB) contributes to the burden of the disease, with lymph node TB being the commonest form of EPTB. The incidence of TB is at an increase due to poor hygiene, poverty, and overcrowding. TB contributes to 2 million deaths worldwide every year. It has been reported that host risk factors for EPTB include younger age, female sex and non-white race.

Aim: The aim of the study was to study the demographic profile of patients presenting with cervical lymphadenopathy.

Materials and Methods: Patients with TB cervical lymphadenopathy attending out-patient departments of Pulmonary Medicine, Otorhinolaryngology, General surgery in SVS Medical College and Hospital were reviewed from May 2019 to May 2021. 100 patients with tuberculous cervical lymphadenopathy who were satisfying the inclusion criteria were included in the study.

Results: The most common presenting age group was between 20 and 40 years. Mean age was found to be around 25.82 years with a standard deviation of around 12.089, with the youngest in the present series was 5 years old. Higher incidence of disease was seen in females. There were 64% females and 36% males, ratio being approximately 1.7:1. Majority of the patients in this study were found to belong to class 3 and class 4 of Modified Kuppuswamy's classification.

Conclusion: Female gender with age 20–40 years, belonging to class 3 and class 4 of Modified Kuppuswamy's classification was common factor among the patients who developed cervical lymphadenopathy.

Key words: Cervical lymphadenopathy, Demographic details, Extra pulmonary tuberculosis

INTRODUCTION

Tuberculosis (TB) is one of the major public health problems, being the ninth leading cause of death.^[1] Extra pulmonary TB (EPTB) contributes to the burden of the disease, with lymph node TB being the commonest form

of EPTB.^[2,3] TB lymphadenitis is seen in nearly 35% of EPTB of which cervical LN region is the most common to get involved, seen in 60–90%. The incidence of TB is at an increase due to poor hygiene, poverty, overcrowding.^[4] TB contributes to 2 million deaths worldwide every year.^[5] It has been reported that host risk factors for EPTB include younger age, female sex and non-white race.^[6,7] The most common presentation is neck swelling with other presenting signs and symptoms being generalized weakness, weight loss, fever, and headache.^[8]

The present study was taken up with the objective of studying the demographic profile of patients presenting with cervical lymphadenopathy.

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Table 1: The age distribution of study population

Age group	Frequency	Percentage
1–10 years	6	6
11–20 years	35	35
21–30 years	35	35
31–40 years	13	13
41–50 years	7	7
>50 years	4	4
Total	100	100

Table 2: The gender distribution

Gender	Frequency	Percentage
Females	64	64
Males	36	36
Total	100	100

Table 3: The socio-economic status

Socio-economic status	Frequency	Percentage
Class I	7	7
Class II	15	15
Class III	29	29
Class IV	47	47
Class V	2	2
Total	100	100

Aim

The aim of the study was to study the demographic profile of patients presenting with cervical lymphadenopathy.

MATERIALS AND METHODS

Patients with TB cervical lymphadenopathy attending out-patient departments of Pulmonary Medicine, Otorhinolaryngology, General surgery in SVS Medical College and Hospital were reviewed from May 2019 to May 2021. 100 patients with tuberculous cervical lymphadenopathy who were satisfying the inclusion criteria were included in the study.

Inclusion Criteria

All patients with tubercular lymphadenopathy above 1 years of age were included in the study.

Exclusion Criteria

All patients with age <1 year and patients diagnosed with HIV were excluded from the study.

The patients were diagnosed to have cervical tubercular lymphadenopathy based on history, clinical examination and confirmed by either FNAC or EB with histopathological examination (when FNAC was inconclusive). All the demographic details were entered in Microsoft excel and data were analyzed using Epi info 7.2.1.0.

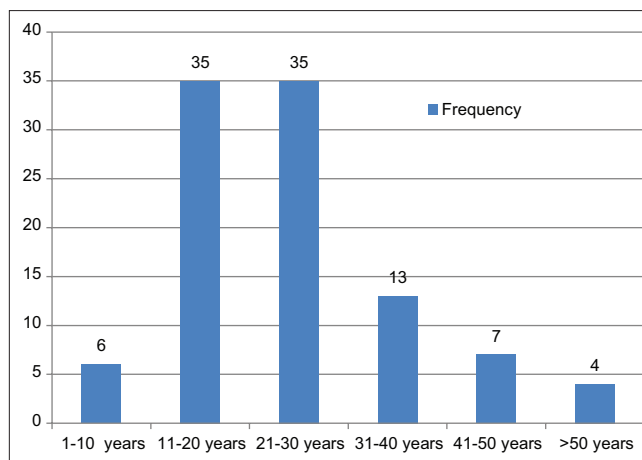


Figure 1: The age distribution of study population

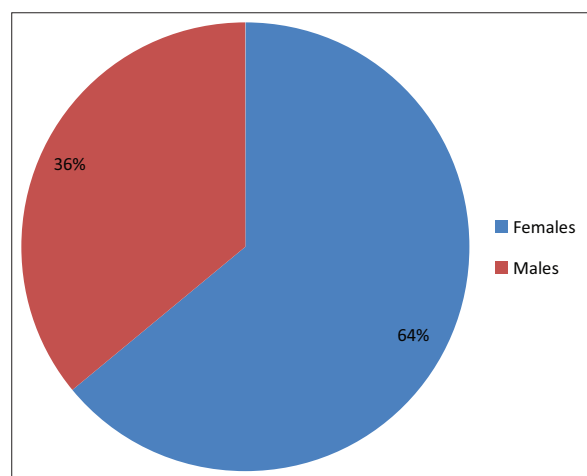


Figure 2: The gender distribution

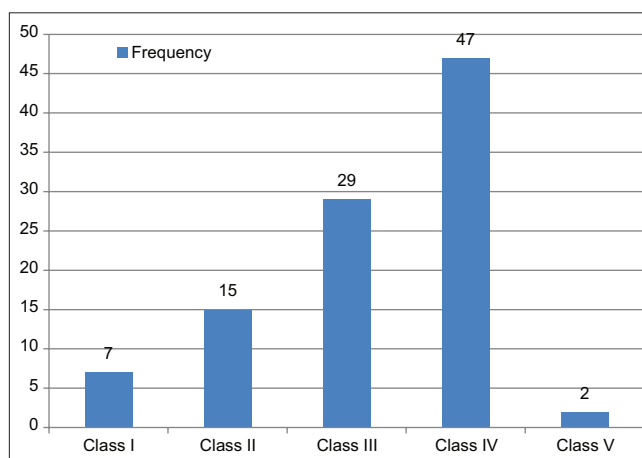


Figure 3: The socio-economic status

OBSERVATIONS AND RESULTS

Age Distribution

The most common presenting age group was between 20 and 40 years. Mean age was found to be around 25.82 years with a standard deviation of around 12.089, with the youngest in the present series was 5 years old.

Table 4: Comparison of age incidence with the other studies

Author	Age group in years					
	1–10 years	11–20 years	21–30 years	31–40 years	41–50 years	>50 years
Present study	6%	35%	35%	13%	7%	4%
Biswas and Begum ^[16]	--	10 cases	9 cases	3 cases	3 cases	--
Muhammad and Bukhari ^[17]	--	44%	31%	11%	8%	2%

Table 5: Comparison of gender with the other studies

Author	Gender (%)	
	Male	Female
Present study	36	64
Biswas and Begum ^[16]	36.6	63.4
Muhammad and Bukhari ^[17]	38	62
Salman <i>et al.</i> ^[18]	42	8

Table 6: The comparison of socio-economic status with other studies

Author	Socio-economic status (%)		
	Low	Middle	High
Present study	49	44	7
Biswas and Begum ^[16]	60	30	10

Gender Distribution

Higher incidence of disease was seen in females. There were 64% females and 36% males, ratio being approximately 1.7:1.

Socio-economic Status

Based on “Updated Kuppaswamy socioeconomic scale 2021, the patients were categorized into 5 classes, where 1 - upper, 2 - upper middle, 3 - lower middle, 4 - upper lower, and 5 - lower. Majority of the patients in this study were found to belong to class 3 and class 4 [Figures 1-3] [Tables 1-6].

DISCUSSION

TB is one of the major public health problems, being the ninth leading cause of death, contributing to 2 million deaths worldwide every year.^[9,10] EPTB contributes to the burden of the disease, with lymph node TB being the commonest form of EPTB.^[11,12] TB lymphadenitis is seen in nearly 35% of EPTB of which cervical LN region is the most common to get involved, seen in 60–90% The incidence of TB is at an increase due to poor hygiene, poverty, overcrowding.^[13] It has been reported that host risk factors for EPTB include younger age, female sex and non-white race.^[14,15] 100 cases of tuberculous cervical lymphadenopathy in this study are compared to other series in literature.

From the above table, the most common age group to be involved in the present series is 11–20 and 21–30. There are also six cases reported in the present series who belong to 1–10 years of age group. In Biswas and Begum study of 30 cases, 9 cases are in the age group between 21 and 30 years. In Muhammad and Bukhari study of 96 cases, 31 cases are in the age group of 21–30 years. In the present series studied, 35 cases are in the age group of 21–30 years which is almost equal to the studies in the literature. Cases above 60 years of age seemed to be unreported from all the three studies.

In the present series, the ratio is 1.77:1. The ratio according to the Biswas and Begum study is 1.73:1 whereas in Muhammad and Bukhari series it is 1.63:1. The ratio in Salman *et al.* study is 1.4:1. The reason behind the female preponderance of the disease could be due to under nutrition, repeated and early pregnancies. Socially, in developing countries women often have a low socioeconomic and nutritional status, which can affect the immune response to the disease.

The present series is compared using the Modified Kuppaswamy SE scale 2021.^[19] (which divides patients into upper, upper middle, lower middle, upper, and lower), to the Biswas and Begum series categorizing the patients into low, middle, and high SES. Majority of the patients in the present series belong to the lower and middle SE status. Overcrowding, poor ventilation, poverty, malnutrition, and unhygienic environment are the predisposing factors for the increased incidence in the low socio-economic status group.

CONCLUSION

Cervical lymphadenitis was more common among females with 1.7:1 ratio with low socio-economic status.

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