

ORIGINAL ARTICLE

Frequency of Tuberculosis in Cervical Lymphadenopathy at Tertiary Care HospitalIFTIKHAR ALI KAKAR¹, NASIR AZIM², ABDUL BAQI³, YASIR ARFAT⁴, AYESHA ABBAS⁵, KHALID SHAHAB⁶, MUHAMMMAD IDREES⁷¹*Pulmonologist, Senior Lecturer, Director Department of Medical Education, Bolan Medical College Quetta*²*Assistant professor, Pulmonologist, Fatima Jinnah institute of chest Diseases Quetta*³*Assistant professor, Pulmonologist, Sheikh Khalifa Bin Zayyed Al Nahyan Medical Complex*⁴*National institute for biotechnology and genetic engineering (NIBGE)*⁵*Department of Biotechnology, University of Okara*⁶*Assistant Professor Medical C Unit, Hayatabad Medical Complex, Peshawar*⁷*Department of Microbiology and Molecular Genetics, University of Okara*Corresponding author: Khalid Shahab, Email: dr.khalidshahab@gmail.com**ABSTRACT****Background:** Tuberculosis is a major public health concern, and it is the most prevalent cause of infectious disease that infects the lymphoid tissue of the body. Clinicians have a diagnostic challenge when treating chronic enlargement of cervical lymph node since it may be a sign of a more serious condition.**Objective:** To assess the frequency of tuberculosis in cervical lymphadenopathy at tertiary care hospital**Methodology:** This descriptive study was undertaken at the Department of Pulmonology, Fatima Jinnah Institute of Chest Diseases and Sheikh Khalifa Bin Zayyed Al Nahyan Medical Complex Quetta from October 2021 to October 2022. A complete physical examination was performed after taking a detailed medical history from each patient. A pre-designed proforma was used for the collection of all required data. SPSS version 23 was used to analyze all of the data.**Results:** In the current study, 140 patients were enrolled. There were 84 (60%) male participants while female participants were 56 (40%). The overall frequency of tuberculosis in patients with cervical lymphadenopathy was 98 (70%).**Conclusion:** Our study concludes that tuberculosis is the prevalent cause of cervical lymphadenopathy. All the patients with cervical lymphadenopathy must be diagnosed for tuberculosis.**Keywords:** Frequency; tuberculosis; cervical lymphadenopathy**INTRODUCTION**

Enlarged cervical lymph node is a clinical sign of many benign and malignant disorders, and accurate diagnosis necessitates invasive testing¹. One of the most prevalent causes of cervical lymphadenopathy is tuberculosis, which may occur either as a separate condition or as a component of systemic tuberculosis^{1,2}. Clinicians have a diagnostic challenge when treating chronic enlargement of cervical lymph node since it may be a sign of a more serious condition. Compared to our country, in which it is a prevalent issue, chronic cervical lymphadenopathy caused by tuberculosis is not important in western world^{3,4}. Even though visceral and pulmonary tuberculosis are getting less common in the west, tuberculous lymphadenitis remains very common in Pakistan⁵. Involvement of the lymph nodes is the most typical extra-pulmonary sign of tuberculosis⁶. Due to its ability to resemble other conditions including lymphoma and the metastases of head and neck malignant tumours, it continues to be difficult to diagnose and treat. The most frequent symptom of tuberculous lymphadenitis is swelling of neck, which is often accompanied by fever, cold abscess and weight loss that might rupture and cause a discharging sinus and non-healing ulcer². Early diagnosis is made possible by a thorough history taken, a thorough physical assessment, regular pre-operative examinations, acid-fast bacilli staining (AFB), excisional biopsy and fine needle aspiration cytology (FNAC)⁷. An excision biopsy has to be done on the largest palpable and most firm node that was completely removed from the body together with its capsule in order to validate the histopathological diagnosis⁸. The goal of this research was to ascertain the frequency of TB in patients with cervical lymph node enlargement who came to a tertiary care hospital's outpatient department (OPD). When detected and treated early, tuberculosis, which is uncommon in the west yet remains prevalent in Pakistan, is a treatable illness that presents a significant risk not just to this country but also to the whole globe.

MATERIALS AND METHODS

This descriptive study was undertaken at the Department of Pulmonology, Sheikh Fatima Jinnah Institute of Chest Diseases and Sheikh Khalifa Bin Zayyed Al Nahyan Medical Complex Quetta. The duration of study was one year from October 2021 to October 2022. The study approval was taken from the hospital

ethical and research committee. The sample size based on WHO sample size calculator was 140. Non-probability sampling technique was used in the current study.

Inclusion criteria:

- All the patients of either sex
- All age patients
- Patients with enlarged cervical lymph nodes for duration of more than two months
- Patients willing to take part in our study.

Exclusion criteria

- Patients with cervical lymph node enlargement of less than 2 months duration
- Patients not willing to take part in our study

The diagnosis of cervical lymphadenopathy was based upon complete head and neck examination and ultrasound confirmation of enlarged lymph nodes. All patients who participated in the research were given a thorough explanation of the goals, benefits and risks of the study and all were convinced that their participation was for the sole purpose of collecting information for scientific publication, and then signed consent was taken from them. A complete physical examination was performed after taking a detailed medical history from each patient. All cervical lymphadenopathy patients were referred for FNAC, and an excision biopsy was then done on the same individuals under local anaesthetic for the purpose of confirming the diagnosis. The biopsy was performed on the lymph node wall in cases with cold abscesses. Epithelioid granulomas with caseation necrosis were observed, confirming the diagnosis of tuberculosis on histopathological investigation. Name, age, gender, residence, and phone numbers were all entered into a pre-designed proforma along with the previously mentioned data. SPSS version 23 was used to input and analyze all of the data. Mean and standard deviation were computed for numerical such as age, whereas frequencies and percentages were determined for categorical variables such as gender.

RESULTS

In the current study, 140 patients were enrolled. There were 84 (60%) male participants while female participants were 56 (40%). (Figure 1) On the basis of age the enrolled patients were divided

into three groups. There were 28 (20%) patients in age group <18 years, 84 (60%) patients in age group 18-40 years and 28 (20%) patients were >40 years old. (Figure 2) Based on enlargement of lymph nodes, 84 (60%) patients were observed with matted enlarged lymph nodes whereas 56 (40%) patients were observed with discrete lymph nodes. (Figure 3) The overall frequency of tuberculosis in patients with cervical lymphadenopathy was 98 (70%). (Figure 4)

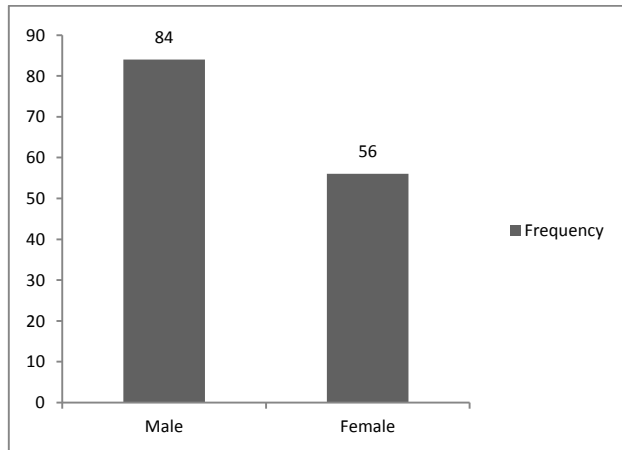


Figure 1: Gender wise distribution of patients

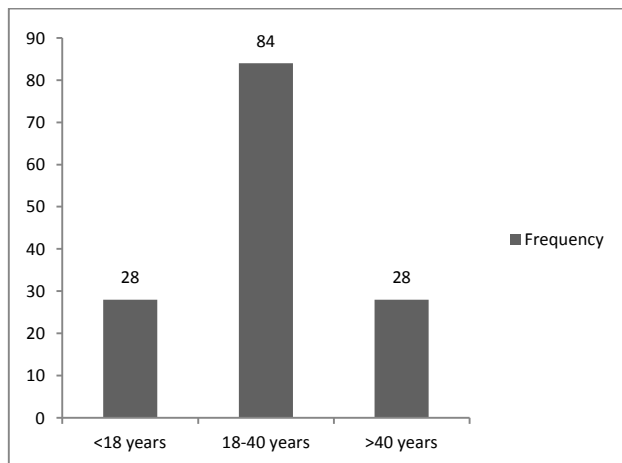


Figure 2: Age wise distribution of patients

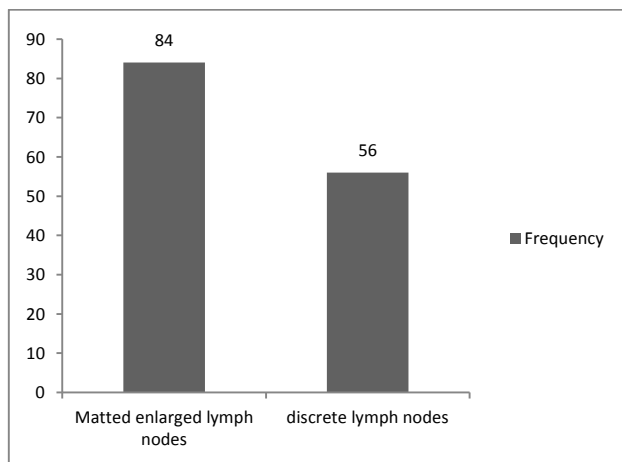


Figure 3: Distribution of patients based on the type of enlargement of lymph nodes

DISCUSSION

Tuberculosis is a major public health concern, and it is the most prevalent cause of infectious illness infecting the body's lymphoid tissue¹. Clinicians have a diagnostic challenge when treating chronic enlargement of cervical lymph node since it may be a sign of a more serious condition. In the current study, 140 patients were enrolled. There were 60% male participants while female participants were 40%. On the basis of age the enrolled patients were divided into three groups. There were 20% patients in age group <18 years, 60% patients in age group 18-40 years and 20% patients were >40 years old. Based on enlargement of lymph nodes, 60% patients were observed with matted enlarged lymph nodes whereas 40% patients were observed with discrete lymph nodes. The overall frequency of tuberculosis in patients with cervical lymphadenopathy was 98 (70%). In accordance with our study, another study carried out by Yassin MA et al. who reported 72.8% frequency of tuberculosis amongst 147 patients of cervical lymphadenopathy⁹. Many local studies reported comparable results to our study. A study carried out in Karachi by Umer MF et al. reported 70% prevalence of tuberculosis amongst patients of cervical lymphadenopathy which is in accordance with our findings¹⁰. Another study carried out by Javaid M et al. reported 57.2% prevalence of tuberculosis amongst patients of cervical lymphadenopathy which is less than our findings¹¹. Choudary et al. found that 58% of the individuals they investigated had cervical lymphadenitis at the time of presentation¹². Another research found a 36% incidence of tuberculous lymphadenitis, despite the fact that tuberculosis was the leading cause of lymphadenopathy in their cohort as well, but the numbers reported were lower than those in ours. This discrepancy might be attributed to disparities in selection of patient and local referral patterns¹³. Our results were also remarkably comparable to the findings of a research done in Kathmandu¹⁴. There were 60% male participants while female participants were 40%. The majority of patients were in 18-40 years old. These findings are in line with previous similar study¹⁵. According to another research, the most prevalent age group afflicted with fewer constitutional symptoms is 11 to 20 years¹⁶. According to an Indian research, there is higher female participation^{17,18}. Another research revealed a male predominance¹⁹. Differences in outcomes may be attributable to a combination of patient selection, treatment adherence, social and cultural variables, patient socioeconomic level, and national health care infrastructure. Tuberculous lymphadenitis could appear in a variety of ways, ranging from a single lymph node site involvement to numerous lymph node site involvement, which can be matted or discrete and might encompass any group or appeared as a cold abscess or discharging sinus. This spectrum was seen in both this research and previous investigations^{20,21}. The majority of patients in our research had matted lymph nodes, which was also observed in another study²². All the patients with cervical lymphadenopathy must be diagnosed for tuberculosis because tuberculosis is treatable problem when detected and treated early. The major drawback in our research was limited sample selection other studies in multiple centers with large number of participants should be carried out to get more accurate results.

CONCLUSION

Our study concludes that tuberculosis is the prevalent cause of cervical lymphadenopathy. All the patients with cervical lymphadenopathy must be diagnosed for tuberculosis. Tuberculosis is treatable problem when detected and treated early.

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