

Presentation and Aetiological Aspects of Tuberculous Lymphadenitis at District Sialkot

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ABSTRACT

Objective: The present study was conducted to assess the presentation and etiological aspects of tuberculosis cervical lymphadenopathy for early detection, diagnosis and prompt specific therapy.

Study Design: Descriptive study.

Place and Duration of Study: This study was conducted at the Department of Surgery and ENT of Allama Iqbal Memorial Hospital Sialkot from July 2009 to July 2014.

Materials and Methods: Data was collected including history, family history, socioeconomic status, history of contact and symptoms. They have already undergone FNAC and only those with inconclusive FNAC underwent excision biopsy.

Results: Total sample size was 372 males and females were 232, age range of 0 to 70 years. The younger was a newborn of 2 months of age with history of tuberculosis in mother and the oldest was a 70 year of age with prolonged history of pulmonary tuberculosis.

Conclusion: Frequency of tuberculosis is more common in Sialkot district. The main reason of prevalence of tuberculosis is poor hygiene, poverty, overcrowding, tanneries spill over contaminating drinking water. Timely diagnosis is better option in order to reduce such incidence and therapy reducing cost of treatment.

Key Words: Mycobacterial infection, Tuberculosis, FNAC, Excision biopsy, Migrant

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INTRODUCTION

Tuberculosis is one of the commonest cause of peripheral lymphadenopathy in most countries of Asia and Africa with varying frequency of 44-56%.¹ It has become one of the major health problem in population with an estimated one third of world population and 3-4 million new cases are found every year.² The body has approximately 600 lymph nodes, Only those in Submandibular, Axillary or Inguinal regions may normally be palpable in healthy people.³ Chronic cervical lymphadenopathy (Enlarged lymph nodes for more than 3 weeks) may result from a variety of different underlying diseases.⁴ Cervical lymphadenopathy is usually defined as cervical lymph nodal tissue measuring more than 1 cm in diameter.⁵ In the world various etiological reasons are described for this increasingly becoming problem.⁶ One of the commonest extra pulmonary manifestations of Mycobacterial infection is cervical tuberculosis lymphadenopathy especially in the developing countries.⁷ Painful tuberculosis lymphadenitis previously termed Scrofula, is a unique manifestation

of disease due to organisms of Mycobacteria Tuberculosis complex.⁸ Tuberculosis lymphadenitis usually present as a slowly progressive painless swelling of a single group of lymph node.⁹ The duration of symptoms at time of presentation is typically 1-2 months, varying from 3 weeks to 8 months.¹⁰ The mean duration of symptoms were significantly longer in men than in women.¹¹ Cervical lymphadenopathy may be unilateral, bilateral, isolated, matted and variable in their consistency from firm or solid in nature.^{12,13} It can occur in all age groups and nearly any organ can be involved. Sialkot being an industrial city due to leather industries, poverty, illiteracy, lack of social awareness and poor hygiene conditions are highly susceptible to tuberculosis. The problem has further been aggravated by lack of health facilities to them, lack of proper diagnostic and therapeutic problem in primary care. Patient referral to special unit with delay and referral for unneeded diagnostic and therapeutic procedures, misuse of trial antibiotics may lead to Tuberculosis.

The present study was conducted to assess the presentation and etiological aspects of tuberculosis cervical lymphadenopathy for early detection, diagnosis and prompt specific therapy which can result in better control and prevention, a rationale for conducting such study was to deliver knowledge to community health workers regarding its prevalence and early diagnosis;

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hoping to contribute to the making of a better and more affective system for diagnosing these patients.

MATERIALS AND METHODS

This Descriptive study was conducted in the busiest surgical unit of Allama Iqbal Memorial Teaching Hospital, Sialkot from July 2009 to July 2014. Data was collected which included (Diameter, texture and tenderness), others (Sex, history including family history, family background, socioeconomic status & history of contact), Duration, Associated signs & symptoms and Location.

Different modalities of investigations are used which include the FNAC, Automatic core needle biopsy, flow cytometry, radiological guided core needle biopsy and open biopsy. Fine needle aspiration was performed in all patients and open biopsy with FNAC results were inconclusive or with abnormal findings (abnormal white blood cells, WBC's abnormal blood film, high ESR > 20 ml/hr, PPD > 10 mm)

RESULTS

Table No.1: Age Distribution

Sr. No.	Age (Years)	Male	Female	Total
1.	0-10	14	7	21
2.	11-20	140	113	253
3.	21-30	94	54	148
4.	31-40	36	27	63
5.	41-50	18	14	32
6.	51-60	14	11	25
7.	61-70	9	6	15
Total		327 (58.5%)	232 (41.5%)	559

Table No.2: Presenting Symptoms

Sr. No.	Symptoms	No. of Patients	%age (out of total)
1.	Neck swelling	557	99.6
2.	Fever	408	72.9
3.	Pain	397	71.0
4.	Cough	271	48.4
5.	Weight loss	225	40.2
6.	Generalized weakness	361	64.5

Table No.3: Site of Disease

Anterior Triangle	Posterior Triangle
295	264

Table No.4: Lymph Nodes Involved

Multiple	Single
443	116

Table No.5: Site of Lymph Nodes Involved

Only Cervical	Cervical & Associated Regions
470	89

Table No.6: Side of Lymph Node Involved

Unilateral	Bilateral
344	215

Table No.7: Demographic Distribution of Patients

S. No.	Demographic Area	Total (%)
1.	URBAN	220 (39.3)
2.	RURAL	289 (51.6)
3.	MIGRANTS OF SWAT	50 (8.9)

Table No.8: Socioeconomic Status

S. No.	Socioeconomic Status	Total (%)
1.	Lower	349 (62.4)
2.	Middle	190 (33.9)
3.	Upper	20 (3.5)

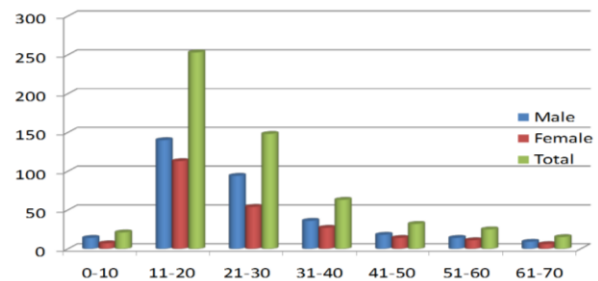


Figure No.1: Age Distribution

DISCUSSION

Tuberculosis is becoming of the major health problems and one of the infectious diseases which involves lymphatic system of body.⁷ Its spread in most countries of Asia and Africa cannot be ignored. Pakistan is also a victim of this disease. In our study, males (58.5%) dominated the females (41.5%). Males were predominantly involved with Tuberculosis in this study while more females were reported in a study from India.¹⁴ The Median age of the patients was 21.5 years, mostly presented between the 1st and 2nd decade of life, which is not in accordance with other local studies.^{15,12} However its involvement of lower socioeconomic status which is also agreed by the studies conducted by Jidal N¹⁶ and local authorities.

As this disease is a disease of poor people, the data suggests that most of the patients belonged to rural were of poor socioeconomic conditions, poor ventilated, overcrowding and unhygienic conditions. Family history of contact was usually denied as a social stigma but when asked indirectly like cause of death of their elders and history of cough and other constitutional symptoms initially denied later accepted and denial was regretted. Constitutional symptoms were present in very few, mostly will present with neck swelling.

Demographic distribution of patients 289 was Rural, 220 Urban and 50 Immigrants came from Swat, Gilgit and Waziristan which is not in accordance with the study carried out at PGMI Lady Reading Hospital Peshawar on 100 cases.¹⁷

Mobility, Softness and tenderness are almost always associated with reactive changes which is similar to observations made by other investigator.¹⁸

In our study the result showed that most common presentation was neck swelling which was present in 99.6 % of cases, other presenting signs and symptoms were generalized weakness, weight loss, fever & headache as shown in table. In a similar study it was found that 100 % of patients presented with painless neck mass, followed by fever 63.7 % and weight loss in 41 % of patients.¹⁹

There was not marked difference of involvement of anterior triangle and posterior triangle, 70 % have both anterior and posterior triangle involved which is not in accordance with other studies conducted by K AV et al* showed the posterior cervical lymph nodes were the commonest and affected in 40 % of cases.²⁰

Size of lymph nodes measured with a ruler or a vernier caliper and their length and width noted in mm or cm. Enlarged lymph node were less than 3 cm or equal to 3 cm in 369 cases while in 190 cases it was more than 3 cm. Consistency of lymph nodes was viewed. It was solid in 300 cases while 162 cases it was cystic, 97 cases swelling with sinus formation.

The Tuberculosis was diagnosed firstly by FNAC in most of cases while open biopsy was carried out in those cases where FNAC was inconclusive. These results are largely variable to Maharjan M, et al where FNAC was found to be effective diagnostic method (94%). FNAC is a reliable diagnostic tool in a case of tuberculosis cervical lymphadenopathy but surgical excision has been recommended for Paradoxical Upgrade Reaction (PUR) for treatment purposes in cases of tuberculosis lymphadenitis and for patients who have discomfort from tense fluctuant lymph nodes.

CONCLUSION

Frequency of Tuberculosis in cervical lymph nodes is more common in Sialkot District. The main reasons for high prevalence of Tuberculosis are poor hygiene, poverty, and overcrowding and tanneries spill over contaminating drinking water. Timely diagnosis is critical in lowering such incidence and therapy reducing overall health care cost.

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

1. Narang P, Narang R. Prevalence of tuberculosis lymph adenitis in children in Wardha District, Maharashtra State, India. *Int J Tuberc Lung Dis* 2005;9:188.
2. Pahwa R, Hedau S, Jain S, Jain N, Arora VM, Kumar N, et al. Assessment of possible tuberculous lymphadenopathy by PCR compared to non molecular methods. *J Med Microbiol* 2005; 54:873-78.
3. Goroll AH, May LA, Mulley AG. Primary care medicine: office evaluation and management of the adult patient. 2nd ed. Philadelphia: Lippincott; 1987.
4. Mansoor I, Aziz SA, Saudi Med J 2002;23(10): 1291.
5. Shrestha AK, Chalise PR, Shrestha ML. Lymph node biopsies: a hospital based retrospective study. *J Nepal Med Assoc* 2009;48:306-309.
6. Thompson MM, Underwood MJ, Sayers KD. Peripheral tuberculous lymphadenopathy. A review of 67 cases. *Br J Surg* 1992;79(8):763-4.
7. Moore SW, Schenider JW, Schaef HS. Diagnostic aspects of cervical lymphadenopathy in children in children in the developing world: a study of 1877 surgical specimens. *Pediatr Surg Int* 2003; 19:240-244.
8. Fontanilla JM. Arti Barnes & C. Fordham von Reyn. Current diagnosis and management of peripheral tuberculous lymphadenitis.
9. Artenstein AW, Kim JH, Williams WJ, Chung R C. Isolated peripheral tuberculous lymphadenitis in adults; current clinical and diagnostic issues. *Clin Infect Dis* 1995;20:876-82.
10. Polesky A, Grove W, Bhatia G. Peripheral tuberculous lymphadenitis: epidemiology, diagnosis, treatment, and outcome. *Med (Baltimore)* 2005;84:350-62.
11. Gonzalez OY, Teeter LD, Thanh BT, Musser JM, Graviss EA. Extrathoracic tuberculosis lymphadenitis in adult HIV seronegative patients: a population-based analysis in Houston, Texas, USA. *Int J Tuberc Lung Dis* 2003;7:987-93.
12. Farooq A, Ameen I, Comparison of FNAC vs excision biopsy for suspected tuberculous cervical lymphadenopathy. *Ann King Edward Med Coll* 2003;9: 216-18.
13. Javiad M, Niamatullah, Anwar K, Said M. Diagnostic value of fine aspiration cytology (FNAC) in cervical lymphadenopathy. *J Postgrad Med Inst* 2006;20:117-20.
14. Agarwal AK, Sethi A, Sethi D, Malhotra V, Singal S. Tubercular cervical adenitis; clinicopathologic analysis of 180 cases. 2009;38:521-5.
15. Hussain M, Rizvi N. Clinical and morphological evaluation of tuberculous peripherally lymphadenopathy. *J Coll Physician Surg Pak* 2003; 13:694-96.
16. Jindal N, Devi B, Aggarwal A. Mycobacterial cervical lymphadenitis in childhood. *Ind J Med Sci* 2003;57:12.
17. Wahid F, Afridi HR. Tuberculous cervical lymphadenopathy: FNAC based study of 100 cases. *J Med Sci* 2011;19(3):119-121.
18. Brown RL, Azizkhan RG. Pediatric head and neck lesions. *Pediatr Clin North Am* 1998;45:889-905.
19. Ying M, Ahujha A, Brook F. Accuracy of sonographic vascular features in differentiating different causes of cervical lymphadenopathy. *Ultrasound Med Biol* 2004;30:441-447.
20. Khan AV, Nawaz G, Khan AK, Roze. An audit of 75 cases of cervical lymphadenopathy. *J Med Sci* 2011;19:95-97..