

ORIGINAL ARTICLE

FREQUENCY AND DISTRIBUTION OF DIFFERENT TYPES OF CERVICAL LYMPHADENOPATHY IN PATIENTS IN D.I.KHAN DISTRICT, PAKISTAN

Arshad Ali Marwat¹, Farmanullah Burki², Aftab Ahmad³, Amir Amanullah⁴, Kamran Iqbal⁵

Departments of ¹Surgery, ²Peadiatrics, ³Radiology, ⁴Anatomy, ⁵ENT, Gomal Medical College, D.I.Khan, Pakistan

ABSTRACT

Background: Cervical lymphadenopathy is a common medical problem. The objective of the study was to determine the frequency and distribution of different types of cervical lymphadenopathy in patients in D.I.Khan, KP, Pakistan.

Material & Methods: This cross sectional study was conducted at Department of ENT, Gomal Medical College, Dera Ismail Khan from April 2013 to March 2016. Sample size was 80, selected through consecutive sampling technique. Patients having enlarged lymph nodes of either sex and of any age of at least 2 months duration were included. Patients having generalized lymphadenopathy were excluded from the study. Gender and age groups were the demographic variables. The research variables were types of cervical lymphadenopathy (tuberculous lymphadenopathy/ reactive hyperplasia/ metastatic carcinoma/ lymphoma) and side of the neck involved (right/ left). All variables being categorical, the frequencies and percentages were calculated. descriptive statistical analysis was done using SPSS version 10.

Results: Out of 80 patients, 42 were males and 38 females. Majority of the patients were in the first decade. Chronic granulomatous diseases especially the tuberculous cervical lymphadenopathy was the most frequent histological findings in 31 patients. Lymphoma was noted in 21, reactive hyperplasia in 18 and metastatic malignancy in 10 cases. Lymph nodes involvement on the right side was more common 36 than on the left side 32.

Conclusion: Unilateral tuberculous cervical lymphadenopathy was most common found especially in young males.

KEY WORDS: Cervical lymphadenopathy; Tuberculosis; FNAC; Lymphoma.

This article may be cited as: Marwat AA, Burki F, Ahmad A, Amanullah A, Iqbal K. Frequency and distribution of diffrendst types of cervical lymphadenopathy in patients in D.I.Khan district, Pakistan. Gomal J Med Sci 2018 Jan-Mar; 16 (1): 12-4. <https://doi.org/10.46903/gjms/16.01.1510>

INTRODUCTION

Cervical lymphadenopathy is usually defined as cervical lymph node measuring more than 1cm in diameter. Lymphadenopathy can involve any site of the body and present at different age groups. Different diseases like tuberculosis, sarcoidosis, lymphoma, bacterial and viral infections and metastatic foci of malignant tumours in the head, neck, throat and face may present with enlarged cervical lymph nodes.^{1,2}

Tuberculosis commonly presents with lymphadenitis in the neck as extrapulmonary manifestation.^{3,4}

Corresponding Author:

Dr. Kamran Iqbal
Department of ENT
Gomal Medical College
D.I.Khan, Pakistan

E-mail: kamran.iqbal10@yahoo.com

Date Submitted: 25-10-2016

Date Revised: 30-08-2018

Date Accepted: 07-09-2018

Recomended standardized protocols for diagnosis of lymphoma include an access to all patients with cervical lymphadenopathy in a weekly neck lump clinic.⁵ FNAC of cervical lymph nodes carries a high diagnostic accuracy especially in malignancy.⁶

Cervical lymphadenopathy is a common medical problem faced by all clinicians.^{1,7} Cervical lymphadenopathy can involve any site of the body and presents in different age groups.⁸

The objective of the study was to determine the frequency and distribution of different types of cervical lymphadenopathy in patients in D.I.Khan, KP, Pakistan.

MATERIAL AND METHODS

This cross sectional study was conducted at Department of ENT, Gomal Medical College, Dera Ismail Khan from April 2013 to March 2016. Mufti Mehmood Teaching Hospital & District Head Quarter Teaching Hospital were the data collecting sites. Sample size was 80, selected through consecutive sampling technique. Patients having enlarged lymph nodes

of either sex and of any age of at least 2 months duration were included. Patients having generalized lymphadenopathy were excluded from the study. Informed consent was taken. Clinical presentation and history of contact with tuberculosis, duration of illness and other relevant information were obtained on a structured proforma. Erythrocyte sedimentation rate (ESR), total leukocyte count (TLC), chest x-ray, ultrasound of the neck and FNAC of the lymph nodes were performed in all subjects. Specific investigations like pus for AFB/ culture and excisional/incisional biopsy of lymph node were employed in patients in whom FNAC was inconclusive. All specimens were sent to Shifa International Laboratory for histopathology. The histological diagnosis was undertaken on morphological grounds. The diagnostic criterion for tuberculosis was the presence of caseating epithelioid cell granulomas in biopsy specimen.

Gender and age groups (1-10/ 11-20/ 21-30/ 31-40/ 41-50/ 51-60/ 61-70 years) were the demographic variables. The research variables were types of cervical lymphadenopathy (tuberculous lymphadenopathy/ reactive hyperplasia/ metastatic carcinoma/ lymphoma) and side of the neck involved (right/ left). All variables being categorical, the frequencies and percentages were calculated. descriptive statistical analysis was done using SPSS version 10.

RESULTS

Out of 80 patients, 42 (52.5%) were males and 38 (47.5%) females. Age group-wise distribution of the patients is as follows. Table 1

Table 1: Gender and age group-wise distribution of patients with cervical lymphadenopathy in D.I.Khan, KP, Pakistan (n=80).

Variables	Frequency & percentage
Gender	
Male	42 (52.5%)
Female	38 (47.5%)
Age groups	
01-10 Years	23 (28.75%)
11-20 Years	21 (26.50%)
21-30 Years	13 (16.25%)
31-40 Years	09 (11.25%)
41-50 Years	03 (03.75%)
51-60 Years	10 (12.50%)
61- 70 Years	01 (01.25%)

The tuberculous cervical lymphadenopathy was in 31 (38.75%) patients. Reactive hyperplasia was noted in 21 (26.25%), metastatic carcinoma in 18 (22.5%) and lymphoma in 10 (12.5%) cases. Table 2

Table 2: Distribution of cervical lymphadenopathy in patients in D.I.Khan, KP, Pakistan (n=80).

S. No	Type of Lymphadenopathy	Count & %age
1	Tuberculous cervical lymphadenopathy	31 (38.75%)
2	Reactive hyperplasia	21 (26.25%)
3	metastatic carcinoma	18 (22.50%)
4	Lymphoma	10 (12.50%)

Lymph nodes involvement on the right side was more common 36 (45%) than on the left side 32 (40%).

DISCUSSION

In the present study, minimum age was 1 year and maximum 70 years. Almost similar results were also reported in a study conducted locally in which age range of the patients was 10 - 70 years.⁹ Majority of the patients were in the first decade of their life. But another study has reported a higher incidence in second decade of life.¹⁰ But on the other side, in another study the age group mostly involved was 21-40 years which is contrary to our results.¹¹

In the present study males 42 (52.5%) were more commonly affected than females 38 (47.5%). The results of the present study are in accordance with previous work already reported in the literature.¹²⁻¹⁴ Similarly local study by Siddiqui FG has reported male predominance with 52.9% male and 47.1% female cases.¹⁴ But other studies have reported female preponderance contrary to our findings.^{11,14}

In this study besides tuberculous cervical lymphadenopathy being the most common (38.75%) pathological cause, reactive hyperplasia was found in 26% cases, metastasis to cervical lymph nodes in 22.5%, and lymphoma in 12.5% cases. Almost similar results are reported in a study conducted in Kathmandu, in which causes of cervical lymphadenopathy were tuberculous lymphadenitis (54%), reactive hyperplasia (33%) and metastatic lesion in lymph nodes (11.1%).¹⁵ Our reports are in tandem with another local study in which out of total 220 patients with enlarged neck lymph nodes, tuberculous lymphadenitis was the most common occurrence (70.45%).^{16,17} All of the tuberculous patients studied by Chaudry N, 58% presented with cervical adenitis.¹⁷ Tuberculosis had been the major cause of lymphadenopathy as evident by another study, showing an incidence of 36% but overall incidence was less as compared to the present study. This disproportion might have been due to differences in local referral pattern and patient selection.¹⁸ In Pakistan, tuberculosis as a cause of cervical lymphadenopathy is up to 75%.¹⁹ But tuberculosis has become a rare occurrence in western countries due to better awareness about the disease, higher standard of life and better medical care.²⁰

The present study has certain limitations as it was conducted in a small study group. A large sized,

prospective, randomized and various centers of the city should be included to study the various causes of cervical lymphadenopathy.

CONCLUSIONS

Unilateral tuberculous cervical lymphadenopathy was most common found especially in young males.

REFERENCES

1. Gospodarowicz MZ, Soug JY, Cheong HJ. Disease spectrum of cervical lymphadenitis, analysis based on ultrasound guided core needle biopsy. *J Infect* 2007;55:310-6. <https://doi.org/10.1016/j.jinf.2007.06.004>
2. Umer MF, Mehdi SH, Muttaqi A, Hussain SA. Presentation and aetiological aspects of cervical lymphadenopathy at Jinnah Medical College Hospital Korangi; Karachi. *Pak J Surg* 2009;25:224-6.
3. Khurshid R, Shore N, Saleem M, Naz M, Zameer N. Diagnostic significance of adenosine deaminase in pleural tuberculosis. *Pak J Physiol* 2007;3:1-3.
4. Khan HU, Khan MH, Khan AM, Noor-ul-Iman, Khan H, Habib H. Anti-tuberculous therapy induced liver injury: frequency, management and outcome. *J Med Sci* 2009;17:99-102.
5. Channa MA, Urooj R, Mirza MR, Gooda MR, Jaleel F, Khan S, et al. Frequency of tuberculosis in cervical lymphadenopathy: our experience. *Pak J Surg* 2010;26: 28-30.
6. Sreeramareddy CT, Panduru KV, Verma SC, Joshi HS, Bates MN. Comparison of pulmonary and extra pulmonary tuberculosis in Nepal: a hospital based retrospective study. *BMC Infect Dis* 2008;8:1-7. <https://doi.org/10.1186/1471-2334-8-8>
7. Sheikh GM, Samad A. Pattern of tuberculous lymphadenitis: the Isra University Hospital experience. *J Liaqat Uni Med Health Sci* 2005;4:3-5. <https://doi.org/10.22442/jlumhs.05410048>
8. Naqvi SQH, Memon JM, Ansari NA, Memon RA, Akhund AA. Role of fine needle aspiration cytology in peripheral lymphadenopathy. *Pak J of Surg* 2006;22:96-9.
9. Mohapatra PR, Janmeja AK. Tuberculous lymphadenitis. *J Assoc Physicians India* 2009;57:585-90.
10. Sun HB, Zheng XF, Zhang J. Diagnostic accuracy of fine needle aspiration biopsy of cervical lymph node: a study of 580 cases. *Zhonghua Bing Li Xue Za Zhi* 2008;37:693-7.
11. Zeshan QM, Mehrukh M, Shahid P. Audit of lymph node biopsies in suspected cases of lymphoproliferative malignancies, implications on the tissue diagnosis and patient management. *J Pak Med Assoc* 2000;50:179-82.
12. Javaid M, Niamatullah, Anwar K, Said M. diagnostic value of fine needle aspiration cytology (FNAC) in cervical lymphadenopathy. *J Postgrad Med Inst* 2006;20:117-20.
13. Majid A. Prevalence of tuberculosis in cervical lymphadenopathy. *The Professional* 1996;3;223-7.
14. Siddiqui FG, Ahmed Q. Cervical lymphadenopathy. *J Surg Pak* 2002;7:23-5.
15. Maharjan M, Hirachan S, Kafle PK, Bista M, Shrestha S, Toran KC, et al. Incidence of tuberculosis in enlarged neck nodes, our experience. *Kathmandu Univ Med J* 2009;7:54-8. <https://doi.org/10.3126/kumj.v7i1.1766>
16. Khan SJ, Latif Z, Hassan H, Khan AJ, Ahmed B, Khalid N. Tuberculous lymphadenitis as a cause of cervical lymphadenopathy. *J Rawal Med Coll* 2003;7:36-8.
17. Choudhury N, Bruch G, Kothari P, Rao G, Simo R. Four years' experience of head and neck tuberculosis in a south London hospital. *J R Soc Med* 2005;98:267-26. <https://doi.org/10.1177/014107680509800606>
18. Shaikh SM, Baloch I, Bhatti Y, Shah AA, Shaikh GS, Deenari RA. An audit of 200 cases of cervical lymphadenopathy. *Med Channel* 2010;16:85-7.
19. Malik GA, Rehan TM, Bhatti SZ, Riaz JM, Hameed S. Relative frequency of different diseases in patients with lymphadenopathy. *Pak J Surg* 2003;19;86-9.
20. Yassin MA, Olobo JO, Kidane D, Negesse Y, Shimeles E, Tadesse A et al. Diagnosis of tuberculous lymphadenitis in Butajira, rural Ethiopia. *Scand J Infect Dis* 2003;35:240-3. <https://doi.org/10.1080/00365540310004027>

CONFLICT OF INTEREST
Authors declare no conflict of interest.
GRANT SUPPORT AND FINANCIAL DISCLOSURE
None declared.

AUTHORS' CONTRIBUTION

The following authors have made substantial contributions to the manuscript as under:

Conception or Design:	AAM
Acquisition, Analysis or Interpretation of Data:	AAM, FB, AA
Manuscript Writing & Approval:	AAM, FB, AA, KI

All the authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.



Copyright © 2020 Arshad Ali Marwat, et al. This is an Open Access article distributed under the terms of the Creative Commons Attribution-Non Commercial 4.0 International License, which permits unrestricted use, distribution & reproduction in any medium provided that original work is cited properly.