

Aetiology and Presentation of Cervical Lymphadenopathy In Baquba Teaching Hospital

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Abstract

Background: Cervical lymphadenopathy is a common presenting complaint in an out-patient clinic in Baquba Teaching Hospital. There are various causes which can cause enlargement of cervical lymph nodes starting from simple inflammation to malignant causes. Tuberculous adenitis is an important and familiar cause of cervical lymphadenopathy which is more common in low socio-economic countries. Fine needle aspiration, incisional and/or excision biopsies are performed to reach the definitive diagnosis.

Objective: To find out the most common causes of cervical lymphadenopathy in Baquba Teaching Hospital.

Patients and Methods: It is a prospective study conducted in Baquba Teaching Hospital over four years (2009-2013). Patients involved in the study are those with cervical lymphadenopathy for more than 3 weeks that are not responding to medical treatment. Fine needle aspiration and incisional or excisional biopsy performed for all patients.

Results: One hundred and eighty seven patients (103 males, 84 females) with cervical lymphadenopathy were included in the study. The age range of the patients was from 10 to 75 years. The most common two cause were Tuberculous lymphadenitis 69(36.9%) and Hodgkin's lymphoma 61(32.6%). The aforementioned causes were followed in order of frequency by reactive changes 23(12.3%) and non-specific inflammation 19(10.2%). The least common causes were metastatic carcinomas 13(7%), non-Hodgkin lymphoma 2(1%).

Conclusion: Tubercular cervical lymphadenitis is a common disease in our country. So it is recommend to exclude tubercular lymphadenopathy in any patient presented with chronic lymphadenitis that is not responding to medical treatment. Early diagnosis & proper treatment will lead to recovery of the disease and lessen the complications.

Key words: Cervical lymphadenopathy, Tubercular lymphadenopathy, Lymphoma.

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Received: 20th February 2018

Accepted: 18th March 2018

<https://doi.org/10.26505/DJM>

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Introduction

Lymphatic system is part of the defense mechanism of the body. Interstitial fluid is drained through the lymphatic system and filtered by nodes which are distributed throughout the body. Cervical nodes which drain the head, neck and part of chest, are exposed lymph nodes of the body. Cervical

lymphadenopathy is common in childhood. [1]. Different diseases can cause lymph node enlargement. However, the majority of the patients with neck lymphadenopathy lasting less than three weeks have benign reactive cause. Differential diagnosis of cervical lymphadenopathy is so vast that a focus is

essential. Lymphadenopathy can involve different age groups and different site of the body [2-4].

Lymphadenopathy is considered a common clinical presentation in an outpatient departments. It is a cause of concern for both the patient and physician even when symptom are absent[5-8].

Lymphadenopathy causes can be generally classified as [9, 10]:

- 1- Infection: Tuberculosis, streptococcal infection, measles, pediculosis, chickenpox, infectious mononucleosis, HIV, toxoplasmosis.
- 2- Malignancy: lymphoma, acute lymphoblastic leukemia, and metastasis.
- 3- Autoimmune: Rheumatoid arthritis, systemic lupus erythematosus.
- 4- Drugs: phenytoin, cotrimoxazole, allopurinol, atenolol and penicillins.
- 5- Others: sarcoidosis, storage disorders, histiocytosis.

Cervical lymphadenopathy could be due to different diseases like tuberculosis, lymphoma, metastatic malignancy, sarcoidosis and viral and bacterial infections of head, neck, throat and face. Tubercular lymphadenopathy is the most common extra pulmonary form of tuberculosis and cervical lymphadenopathy is the most commonly extra pulmonary form of the disease[11, 12]. Tuberculosis (TB) is the first differential diagnosis for a patient who presents with chronic lymph node enlargement (>3 weeks) in India, Asia and some of the other developing countries, [13, 14]. However, studies had been shown that more than 50%

of cases of lymphadenopathy are due to non-tubercular causes and, in such cases, excision biopsy with histopathology and/or microbiological examination, is the only way to exclude tuberculosis [15]. Malignancies responsible for about 1% of cases of lymphadenopathies [16].

Of the many causes in adults, lymphoma and HIV infection should be excluded in inconclusive cases [13]. A 5 months data from Lymphoma Clinic in South African revealed that 18 out of 21 patients of lymphoma were diagnosed mistakenly as tuberculosis [17]. The most common type of lymphoma is “diffuse large B cell lymphoma” followed by “follicular lymphoma” [18, 19]. Follicular lymphoma is the most common indolent lymphoma [20].

Patients and Methods

This is a prospective study conducted in Baquba Teaching Hospital over the period of four years (January 2009- December 2013). The patients were admitted from both a private and outpatient clinic. First a full history taken with thorough physical examination performed for all the patients. Then, laboratory tests including complete blood picture, CRP and erythrocyte sedimentation test (ESR). Imaging studies as chest X-ray, ultrasound and/or computerized tomography scan (CT scan) of abdomen to detect others site of lymph nodes were also performed. Fine needle aspiration cytology done for all patients to isolate patients who's lymphadenopathy are malignant or suspected to be malignant and those who have high suspicion of being tubercular

lymphadenopathy. The long history and the outcome of physical examination give the physician suspicion of malignant changes. All cytological results which are reactionary (mainly inflammatory) were given a chance of three weeks treatment with the usual antibiotics. All patients with malignant ctologies and, those with suspected malignancy or suspicion of tuberculosis and those who are not responding to the usual antibiotics were submitted to incisional or excisional biopsy. The results of excisional biopsy and histopathology was the corner stone of final diagnosis. The patients with reactive lymphadenopathy were reassured, treated as simple cases and those with tuberculous lymphadenitis were treated with anti-tuberculosis chemotherapy. Those patients with lymphomas and those with metastatic lymphadenopathy were referred the oncologist for management.

In case of malignant metastasis to cervical lymph nodes, a thorough screening for the primary source is achieved.

Statistical Analysis

Statistical significance is calculated using number in percentage put intable and figural.

Results

One hundred and eighty seven patients were included in the study (103 (56.1%) were males while 84(43.9%) were females) table (1). Out of these 187 cases, 145 patients were complaining from involvement of superficial group (mainly in the posterior triangle of the neck). The reminder 42 patients were involving the deep groups of the lymph nodes (both in the anterior and posterior triangles) figuer(1). Age of the patients ranged between 10 -75 years (the majority were in the age group 11-20) followed by those in the age range 31-40 table (2) and involvement of unilateral lymph nodes by the enlargement was commonest than bilateral involvement.

Table (1): Sex distribution of the patients (number of patients 187).

Sex	Male No (%)	Female No (%)	Total
	103 (55.08%)	84 (44.919%)	187

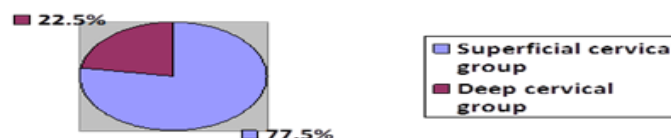


Figure (1): Distribution of lymphadenopathy according to site of the neck involved.

Table (2): Age distribution of the patients (number of patients 187).

Age groups (years)	Total	Male	Female
10-20	55	37	18
21-30	42	22	20
31-40	43	24	19
41-50	15	8	7
51-60	14	6	8
61-70	14	5	9
71-75	4	3	1
Total	187		

The majority were in the age group 11-20 followed by those in the age range 31-40.

Table (3): Distribution of the patients according to the cause of cervical lymphadenopathy.

Aetiology	number	Percent%	Male	Female
Tuberculosis	69	36.9%	39	30
Hodgkin's lymphoma	61	32.6%	36	25
Reactive changes	23	12.3%	12	11
Chronic nonspecific infl.	19	10.2%	10	9
Metastatic carcinoma	13	7%	5	8
Non-Hodgkin lymphoma	2	1%	1	1
Total	187	100	103	84

Histopathology revealed that 69(36.9%) patients have tuberculosis. This is followed by Hodgkin's lymphoma which accounts for about 61 cases (32.6%). Reactive changes and chronic nonspecific inflammation accounted for 23(12.3%) & 19(10.2%) respectively. Metastatic carcinoma 13(7%) and finally, non-Hodgkin's lymphoma [2] cases which accounted for (1%) table (3).

Discussion

The most frequent cause of cervical lymphadenopathy in our study was tuberculosis (36.9%). This is in accordance with study done by Dandapat et al 41.5% & Castro et al 46%[12]. the most common

group involved was the posterior followed by upper deep group. Study by Weiler Z et. al. prove that posterior nodes were affected in 42% of cases then the upper deep lymph nodes 16% and submandibular group in 15% of cases[21]. With regard to the sex distribution for a patients having tuberculosis, the current study revealed that 56.1% of cases were males & 43.9% were females, which is closed to a study done by Pandit AA, Candes FP, Khubchandani SR. and these by Al-Mulhim AS, et.al which revealed that 52.9% of cases were male & 47.1% were female[22-24]. The amazing thing in our study is that the Hodgkin's lymphoma of

lymph nodes constitute 32.6% of cases. The number is bigger than that shown by Luminari S et.al. in their study where tubercular tuberculosis constitute only 19.34%. This indicate high prevalence of tuberculosis in our country.

Metastatic cancer in a cervical lymph node constitute 7% in the current study. This number is slightly larger than that shown by Mack Y, Parsons JT, Mendenhall WM et al. which revealed a 4% as a cause for the cervical lymphadenopathy[25].

Conclusion

As tuberculosis is the main cause of cervical lymphadenopathy in our country, Early diagnosis and proper treatment lead to recovery of disease and lessen the complication.

Lymphoma is another significant cause which should not be ignored.

Recommendation

Because of the different causes that can cause cervical lymphadenopathy and because many of them are serious diseases, it is of utmost importance to investigate any case presented with cervical lymphadenopathy.

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