

## BIOPSY RESULTS OF CERVICAL LYMPHADENOPATHY AT TERTIARY CARE UNIT

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## ABSTRACT

**Background:** Cervical lymphadenopathy is a very common complication of many diseases e.g. bacterial and viral infection, tuberculosis, lymphomas, malignancy and autoimmune diseases. In Pakistan, according to many studies the most common cause of cervical lymphadenopathy is tuberculosis. Because in our country prevalence of TB is very high as compared to western world Several investigations are usually done in order to establish the cause of lymphadenopathy but biopsy of the node is proven to be Gold standard. **Objective:** To determine the frequencies of various causes on lymph node biopsy in cases presenting with cervical lymphadenopathy. This would help doctor to get basic idea about prevalence of different clinical profiles of cervical lymphadenopathy for easier detection and better therapeutic outcomes. **Methodology:** It is a cross sectional study done at Nishtar Hospital Multan. In 7 months of duration from June 2017 to December 2017. In this study total 65 cases were enrolled through non-probability consecutive sampling technique. 65 cases of both genders falling in the age group of 15 to 75 years presenting with cervical lymph node enlargement were enrolled. These cases then underwent FNAC or surgical excision at the surgical department of the same institute. The results of biopsy were collected from Pathology department and the various outcomes were noted. **Results:** In this study there were total 65 cases out of which 38 (58.4%) were males and 27 (41.5%) females with mean age of 34±14.21 years. Out of 60 cases, 26 had firm to hard consistency and 37 had soft or rubbery consistency. On lymph node biopsy, TB was seen in 22 (33.8%) male and 17 (26%) female cases, malignancy in 6 (9.2%) male and 4 (6.1%) female cases, chronic non-specific inflammation in 7 (10.7%) male and 5 (7.6%) female cases, Hodgkin lymphoma in 2 (3%) male and 1 (1.5%) female (3.33%) cases and non-Hodgkin lymphoma in 1 male patient. There were 11/65 patients in age group 15-35years, 16/65 cases in age group 36-55 years and 12 cases in 56-75 years diagnosed as TB. There were 4/65 patients in age group 15-35years, 5/65 cases in age group 36-55 years and 3 cases in 56-75 years showed chronic non-specific inflammation on biopsy. There were 1/65 patients in age group 15-35years, 2/65 cases in age group 36-55 years and 7/65 cases in 56-75 years who were having malignant finding on lymph node biopsy. 1/65 patients in age group 15-35years and 2/65 cases in age group 36-55 years were having reed-Stenberg cells on lymph node biopsy result. Non-Hodgkin lymphoma was seen in the biopsy result of a 70 years old man. The constitutional sign and symptoms including fever, weight loss, night sweats and anemia were common in patient having TB and malignancy. **Conclusion:** Tuberculosis is the commonest presentation of cervical lymphadenopathy in our hospital and soft, rubbery and ulcerated consistency is significantly associated with this. Both genders are almost equally effective.

**KEYWORDS:** Cervical lymphadenopathy, TB, Malignancy, Biopsy, FNAC, Lymphomas.

## INTRODUCTION

Lymphadenopathy is a disease of lymph node, in which they are abnormal in size, shape and consistency. It is a common problem in all age groups, mostly it occurs as a temporary response to local and general infection but sometime it may be due to malignant causes.<sup>[1]</sup> It is important to take careful history and do examination regarding duration, location, pain, tenderness, consistency, growth pattern, associated symptoms (weight loss, anorexia, night sweats, fever, chill, and fatigue), animal bite, travel, trauma, and family history

of malignancy. History and examination can give clue to underlying disease, it is usually a self-limiting reaction in young adults or a malignancy in older patients.<sup>[2]</sup>

There are many causes of cervical lymphadenopathy e.g. pharyngitis, otitis, dental abscess, measles, rubella, infectious mononucleosis, tuberculosis lymphadenitis, viral infection, lymphomas and malignancy. Every cause of cervical lymphadenopathy has some general characteristics. In head and infections, lymph nodes are usually tender, fixed, fluctuant, overlying skin erythema and there will be sign and symptoms of infection. In

children infections are the most common cause of cervical lymphadenopathy. In TB, deep cervical lymph nodes are mostly effected, they are usually non-tender, matted and if caseation has occurred it appears as ulcer or sinus. Lymphadenitis is the most common extrapulmonary manifestation of TB.<sup>[3]</sup> In malignancy they appear to be enlarged, fixed, stony hard, irregular margins and painless. There will be history of constitutional symptoms and generalized lymphadenopathy. In lymphomas (Hodgkin or non-Hodgkin), lymph nodes are usually elastic, rubbery, moveable, and rapidly growing. Risk of malignancy is usually high in patient with generalized lymphadenopathy, lymph node size > 3cm.<sup>[4]</sup> There are various causes present all over the world but in Pakistan most common cause is TB.<sup>[5,6,7]</sup> Western studies about etiology of cervical lymphadenopathy are not directly relevant because what is rarity in west is most common problem in our country.<sup>[8,9]</sup>

There are many diagnostic modalities include X-ray, CBC, ESR, Montoux test, CT-scan and MRI but the gold standard is lymph node biopsy.<sup>[10]</sup> the success rate of FNAC in diagnosing cause of enlarged lymph node is 95-100 % in some studies,<sup>[11,12]</sup> but sometimes a small piece of FNAC cannot reveal a good diagnosis and excisional biopsy is preferred.<sup>[13,14]</sup>

#### Methodology

It is a descriptive, cross-sectional study done at Nishtar hospital Multan in a duration of 7 months from June 2017 to December 2017 after getting ethical approval letter from Ethical Review Committee, Nishtar medical university, hospital.

#### Inclusion criteria

Age 15-75 years, irrespective of gender.

Cervical lymph node of atleast 6 weeks of duration.

Persistent enlarged nodes without prior sign of infection.

Increasing size of mass.

Persistent after trial antibiotics.

#### Exclusion criteria

Lymph node size less than 1cm.

Supra aided infection at the site of biopsy.

Bleeding disorder.

Patient not full filling the criteria of biopsy.

Not giving consent.

#### Data collection

Total 65 patients were enrolled in the study. Detailed history regarding age, sex, demographic details, previous treatment, examination findings of enlarged lymph node and significant general physical examination was done. After performing lymph node biopsy, sample sent to pathology department and histo-pathological data collected from them. Necessary routine investigations e.g. CBC, ESR, X-ray chest, Ultrasound of swelling was done. All the data collected through history, examination, lab. Investigations and pathology department was filled in the preformed questionnaire. Statistical analysis was done by using SPSS version 18.0. P-value <0.05 was significant.

#### RESULTS

**Table: Outcome of biopsy with respect to consistency.**

Causes	Firm	Soft
Tuberculosis lymphadenitis	7	31
Chronic non-specific lymphadenopathy	4	6
Malignancy	10	0
Hodgkin lymphoma	3	0
Non-Hodgkin lymphoma	1	0

In this study there were total 65 cases out of which 38 (58.4%) were males and 27 (41.5%) females with mean age of 34±14.21 years. Out of 60 cases, 26 had firm to hard consistency and 37 had soft or rubbery consistency. On lymph node biopsy, TB was seen in 22 (33.8%) male and 17 (26%) female cases, malignancy in 6 (9.2%) male and 4 (6.1%) female cases, chronic non-specific inflammation in 7 (10.7%) male and 5 (7.6%) female cases, Hodgkin lymphoma in 2 (3%) male and 1 (1.5%) female (3.33%) cases and non-Hodgkin lymphoma in 1 male patient. There were 11/65 patients in age group 15-35years, 16/65 cases in age group 36-55 years and 12 cases in 56-75 years diagnosed as TB. There were 4/65 patients in age group 15-35years, 5/65 cases in age group 36-55 years and 3 cases in 56-75 years showed chronic non-specific inflammation on biopsy. There were 1/65 patients in age group 15-35years, 2/65 cases in age group 36-55 years and 7/65 cases in 56-75 years who were having malignant finding on lymph node biopsy. 1/65 patients in age group 15-35years and 2/65 cases in age group 36-55 years were having reed-Stenberg cells on lymph node biopsy result. Non-Hodgkin lymphoma was seen in the biopsy result of a 70 years old man. The constitutional sign and symptoms including fever, weight loss, night sweats and anemia were common in patient having TB and malignancy.

**Table: Different causes of cervical lymphadenopathy among different gender.**

Causes	Male	Female	Total
Tuberculosis lymphadenitis	22 (33.8%)	17 (26%)	39 (60%)
Chronic non-specific lymphadenopathy	7(10.7%)	5(7.6%)	12(18.4%)
Malignancy	6(9.2%)	4(6.1%)	10(15.3%)
Hodgkin lymphoma	2(3%)	1(1.5%)	3(4.6%)
Non-Hodgkin lymphoma	1(1.5%)	0(0%)	1(1.5%)

**Table: Different causes of cervical lymphadenopathy among different Age groups.**

Causes	15-35 years	36-55 years	56-75 years	total
Tuberculosis lymphadenitis	11	16	12	39
Chronic non-specific lymphadenopathy	4	5	3	12
Malignancy	1	2	7	10
Hodgkin lymphoma	1	2	0	3
Non-Hodgkin lymphoma	0	0	1	1

**Table: Clinical presentation observed in 65 patients with respect to their outcomes.**

Sign/symptom	TB	Chronic non-specific lymphadenopathy	Malignancy	Hodgkin lymphoma
Painless node	30	10	9	3
Painful node	9	2	1	----
Fever	31	6	8	2
Night sweats	24	---	7	2
Weight loss	10	---	10	2
> 1 cervical lymph node involved	28	----	8	1
Anemia	10	2	7	1
Hepato-splenomagaly	8	---	6	1
Generalized lymphadenopathy	4	---	7	1

## DISCUSSION

In this study we have shown frequency of histopathological finding in cervical lymph node biopsies and relationship between findings with clinical sign, symptoms, age, gender and consistency of lymph node. In our study we found that most common cause of cervical lymphadenopathy was TB in 60% patients followed by chronic non-specific lymphadenitis 18.4% and metastatic malignancy 15.3%. The incidence of lymphomas was very low in our study. TB was more common in male as compared to female, but there was no significant difference among different age groups.

Metastatic malignancies were almost common in both genders with higher incidence in patient with age more than 55 years. Similar to study in which shown that older age is a risk factor for malignant lymphadenopathy.<sup>[15]</sup> Among malignant finding on histo-pathology squamous cell carcinoma was most common. We found that symptoms like fever, weight loss, anorexia and anemia were more common in Tuberculosis and malignancy. Our results were similar to another study that showed these sign and symptoms are useful and important factor in approach to lymphadenopathy.<sup>[16,17,18]</sup> We could not found any significant relationship between group of cervical lymph node and pathological finding. We could not establish any useful relation between mobility of lymph node and biopsy findings. Many studies resulted

that mobility of lymph node is not reliable criteria for diagnosing malignancy on clinical bases.<sup>[19,20]</sup> We found in our study that malignant node mostly firm and hard while TB lymphadenopathy on pathology report was soft, ulcerated and rubbery. In contrast, to our study, Khajuria Ruchi et al. reported in there study that reactive hyperplasia was most common.<sup>[21]</sup>

In our study frequency of Hodgkin lymphoma is 4.6% which is similar to other studies done in Asia 4.4-18%.<sup>[22,23]</sup> lymphoma is relatively rare and its incidence varies worldwide. Many local studies showed similar results but not internal studies, as in western countries TB prevalence is very less. A study done in Iran revealed reactive lymphadenopathy is most common cause of effecting 62.5% and malignancy 21.6%.<sup>[24]</sup>

## OBJECTIVE

This would help doctor to get basic idea about prevalence of different clinical profiles of cervical lymphadenopathy for easier detection and better therapeutic outcomes. Thus physician should consider level of referral, epidemiological background of that area for better approach to cervical lymphadenopathy.

## CONCLUSION

Tuberculosis is the commonest presentation of cervical lymphadenopathy in our hospital and soft, rubbery and ulcerated consistency is significantly associated with this. Both genders are almost equally effective.

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