

# Outcome of Excisional Cervical Lymph Node Biopsy

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## ABSTRACT

**Introduction:** Lymphadenopathy is a common presentation at Pulmonology departments regarding the concerns of tuberculosis. However, it's a clue of underlying malignancies as well, hence needing excisional biopsy for tissue diagnosis.

**Objective:** To determine the frequencies of various outcomes on excisional lymph node biopsy in cases presenting with cervical lymph adenopathy at the Department of Pulmonology, Sheikh Zayed Hospital, Rahim Yar Khan. **Study design;** Cross sectional study. **Setting;** Department of Pulmonology, Sheikh Zayed Hospital, Rahim Yar Khan. **Duration of study;** October 2016 to April 2017. **Sample size;** In this study total 60 cases were enrolled. **Sampling technique;** Non probability consecutive sampling. **Data collection procedure;** In this study, 60 cases of both genders falling in the age group of 12 to 70 years presenting with cervical lymph node enlargement were enrolled. These cases then underwent surgical excision at the surgical department of the same institute. The outcomes were assessed at the Pathology department and the various outcomes were noted. **Results:** In this study there were total 60 cases out of which 33 (55%) were males and 27 (45%) females with mean age of  $34.22 \pm 11.21$  years. On LN biopsy, TB was seen in 38 (63.33%) cases, metastatic malignancy in 14 (23.33%) cases, non-specific inflammation in 6 (10%) cases, and lymphoma in 2 (3.33%) cases. There was no significant difference in terms of age and gender in biopsy outcomes. However, the TB was seen significantly high in cases with soft consistency and malignancy in those with firm to hard one with  $p = 0.01$ . **Conclusion:** Tuberculosis is the commonest presentation of cervical lymphadenopathy in our territory and soft and rubbery consistency is significantly associated with this.

**Keywords:** Cervical lymphadenopathy, TB, Malignancy

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## INTRODUCTION

Lymph nodes are the reservoir of lymphocytes and their enlargement always reveal an underlying abnormality. Their presence not only adds to the anxiety in the patients, but also can be symptomatic by compressing the nearby organs and structures. Lymph node enlargement especially cervical lymph nodes enlargement is commonly seen and cases are being presented in the medical, surgical and pulmonology out as well as in patient department.<sup>1</sup>

There is a long list of benign and malignant conditions leading to its enlargement. It can be simple post viral or bacterial infection and hence needing a short term management or it can be tuberculous which is even acceptable as it need chemotherapy for only 6 months. On the other hand it is also a sign of various primary or metastatic malignancies like lymphoma, leukemia, carcinoma (CA) lung, breast and various other organs.<sup>2-3</sup>

There is always a need to reach a definitive diagnosis to accurately treat and eradicate the disease for which a detailed history and then due

relevant investigations are often required.<sup>4</sup> The final diagnosis is made by the direct examination of the tissues, which is obtained by surgical excision. There are certain parameters like consistency, number and size number of the lymph nodes that have some predilection towards certain diseases.<sup>5,6</sup> Tuberculosis is one of the most common causes of cervical lymphadenopathy, especially in developing countries like Pakistan and often has matted lymph nodes. Recurrent infections can also lead to reactive lymph adenopathy that are usually discrete and soft. On the other had malignancies in the form of lymphoma has multiple lymph nodes or metastatic diseases show hard nature of these nodes. But nothing is specific to any disease and to reach a definite diagnosis, tissue biopsy is almost always required.<sup>3-5</sup> Fine needle aspiration cytology (FNAC) and excisional biopsy are good invasive tools but sometimes smaller pieces of FNAC can't reveal a good diagnosis and excision biopsy is preferred.<sup>7-8</sup>

## Objective

To determine the frequencies of various outcomes on excisional lymph node biopsy in cases presenting with cervical lymph adenopathy at the Department of Pulmonology, Sheikh Zayed Hospital, Rahim Yar Khan.

## METHODOLOGY

**Study design;** Cross sectional study.

**Setting;** Department of Pulmonology, Sheikh Zayed Hospital, Rahim Yar Khan.

**Duration of study;** October 2016 to April 2017.

**Sample size;** In this study total 60 cases were enrolled.

**Sampling technique;** Non probability consecutive sampling.

**Inclusion criteria;**

1. Age group of 12 to 70 years
2. Both genders
3. Cervical lymph node of at least 1 month of duration

**Exclusion criteria;**

1. The cases with super aided skin infection.
2. The cases with any bleeding disorder.

**Data collection procedure;**

It was a descriptive, cross sectional study. It was conducted at Department of Pulmonology, Sheikh Zayed Hospital, Rahim Yar Khan during the period of October 2016 to April 2017 in which 60 cases of cervical lymph node enlargement were enrolled. The cases of both genders falling in the age group of 12 to 70 years were included. The detailed socio demographic data and clinical history i.e. duration of lymph node enlargement was taken. Then these nodes were examined for their number, size, consistency and the data was recorded. These cases then underwent surgical excision at the surgical department of the same institute. The outcomes were assessed at the Pathology department of the same institute as well and the various outcomes were noted. Data was analyzed with the help of SPSS version 22.0. Post stratification Chi-Square test was applied taking P-value  $\leq 0.05$  as significant.

## RESULTS

In this study there were total 60 cases out of which 33 (55%) were males and 27 (45%) females with mean age of  $34.22 \pm 11.21$  years. Out of 60 cases, 18 (30%) had firm to hard consistency and 42 (70%) had soft or rubbery consistency. On LN biopsy, TB was seen in 38 (63.33%) cases, metastatic malignancy in 14 (23.33%) cases, non-specific inflammation in 6 (10%) cases, and lymphoma in 2 (3.33%) cases (figure 1). There was no significant

difference in terms of age and gender in biopsy outcomes as in table 1 & 2. However, the TB was seen significantly high in cases with soft or rubbery consistency and malignancy in those with firm to hard one affecting 36 out of 42 and 12 out of 18 cases respectively with  $p= 0.01$  as in table 3.

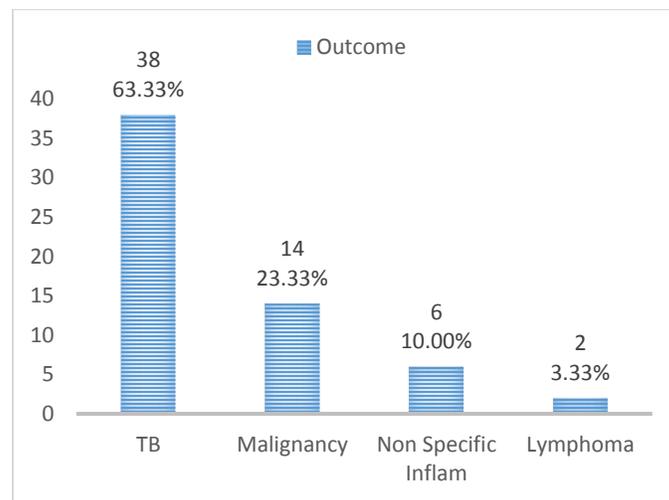


Figure 1: Outcome of excisional biopsy (n= 60)

Table 1: Outcome with respect to gender (n= 60)

Outcome	GENDER		Total
	Male	Female	
<b>TB</b>	22 (57.89%)	16 (42.11%)	38
<b>Malignancy</b>	6 (42.86%)	8 (57.14%)	14
<b>Non specific inflammation</b>	4 (66.67%)	2 (33.33%)	6
<b>Lymphoma</b>	1 (50%)	1 (50%)	2
<b>TOTAL</b>	<b>33 (55%)</b>	<b>27 (45%)</b>	<b>60 (100%)</b>

$p= 0.68$

Table 2: Outcome with respect to age groups (n= 60)

Outcome	AGE GROUPS		Total
	12-40	> 40	
<b>TB</b>	20 (52.63%)	18 (47.37%)	38
<b>Malignancy</b>	5 (35.71%)	9 (64.29%)	14
<b>Non specific inflammation</b>	3 (50%)	3 (50%)	6
<b>Lymphoma</b>	1 (50%)	1 (50%)	2
<b>TOTAL</b>	<b>29 (48.33%)</b>	<b>31 (51.67%)</b>	<b>60 (100%)</b>

$p= 0.27$

**Table 3: Outcome with respect to consistency (n= 60)**

Outcome	CONSISTENCY		Total
	Firm	Soft	
<b>TB</b>	2 (5.26%)	36 (94.74%)	38
<b>Malignancy</b>	12 (85.71%)	2 (14.29%)	14
<b>Non specific inflammation</b>	2 (33.33%)	4 (66.67%)	6
<b>Lymphoma</b>	2 (100%)	0 (0%)	2
<b>TOTAL</b>	<b>18 (30%)</b>	<b>42 (70%)</b>	<b>60 (100%)</b>

p= 0.01

## DISCUSSION

Lymph nodes are predictor of underlying disease and almost always are never normal. These present with different clues in terms of clinical presentation and particular characteristics, towards specific diseases. Excisional biopsy is sometimes necessary to get better and detailed information to reach definitive diagnosis and to plan further for targeted management to decrease the morbidity in such patients.

In the present study, on lymph node biopsy, TB was seen in 38 (63.33%) cases, metastatic malignancy in 14 (23.33%) cases, non-specific inflammation in 6 (10%) cases, and lymphoma in 2 (3.33%) cases. This was similar to a study done by Ismail M et al revealed that out of their cases with excisional cervical lymph node biopsies TB was in 74.5%, reactive lymphadenopathy in 11.1%, metastatic malignancy in 6.7% and lymphoma in 4.4% of cases.<sup>9</sup>

While in another study from Iran by Zahir ST et al revealed reactive lymphadenopathy in most cases affecting 62.5%, while malignancy in 21.6% cases.<sup>10</sup> In another study by Alam J et al, Tuberculous lymphadenopathy was seen in 68.8% cases, reactive adenopathy in 11.7%, metastatic malignancy in 9.8% and lymphoma in 8.4% cases.<sup>11</sup> Moreover in a study by Saifullah MK et al revealed TB lymph nodes in 39.3% cases and malignancy in 26.4% cases.<sup>12</sup>

TB was seen significantly high in cases with soft or rubbery consistency and malignancy in those with firm to hard one affecting 36 out of 42 and 12 out of 18 cases respectively with p= 0.01. This was also observed by the studies in the past that have revealed that the cases that had soft and rubbery

consistency and were also matted in nature were mostly found tuberculous in nature as compared to the firm ones.<sup>13-14</sup> However, they did not find this difference as statistically significant.

## CONCLUSION

Tuberculosis is the commonest presentation of cervical lymphadenopathy in our territory and soft and rubbery consistency is significantly associated with this.

## REFERENCES

1. Habermann TM, Steensma DP. Lymphadenopathy. *Mayo Clin Proc.* 2000;75:723-32.
2. Magsi PB, Jamro B, Sheikh AA, Sangi HA. An audit of 140 cases of cervical lymphadenopathy at tertiary care hospital. *Gomal J Med Sci.* 2013;11(1):47-49.
3. Khan AU, Nawaz G, Khan AR. An audit of 75 cases of cervical lymphadenopathy. *J Med Sci.* 2011;19:95-97.
4. Ahmad N, Shaukat A, Aslam S, Rehan A. Neck Lymph Nodes Characterization on Diffusion MRI. *APMC* 2015;9(1):9-13.
5. Savage SA, Wotherspoon HA, Fitzsimons EJ, Mackenzie K. Cervical lymphadenopathy resulting in a diagnosis of lymphoma. *Scott Med J.* 2008;53:13-16.
6. Malik GA, Rehan TM, Bhatti SZ, Riaz JM, Ha-meed S. Relative frequency of different diseases in patients with lymphadenopathy. *Pak J Surg* 2003;19:86-9.
7. 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.
8. 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.
9. Ismail M, Muhammad M. Frequency of tuberculosis in cervical lymphadenopathy. *J Postgrad Med Inst.* 2013;27(3):342-46.
10. Zahir ST, Azimi A. Histopathologic findings of lymph node biopsy cases in comparison with clinical features. *Pak J Med Sci.* 2009;25(5):728-33.
11. Alam J, Nasir IUI, Iftikhar M, Khan SA, Aslam R, Alam M. Frequency of tuberculosis in cervical lymphadenopathy, our experience. *Khyb J Med Sci.* 2015;8(2):188-91.
12. Saifullah MK, Sutradhar SR, Khan NA, Haque MF, Hasan I, Sumon SM, et al. Diagnostic evaluation of supraclavicular lymphadenopathy. *Mymensingh Med J.* 2013;22(1):8-14.
13. Agarwal AK, Sethi A, Sethi D, Malhotra V, Sin-gal S. Tubercular cervical adenitis: clinicopathologic analysis of 180 cases. *Indian J Otolaryngol* 2009;38:521-5.
14. Tariq NA. Presentation of cervical lymphadenopathy to the surgeon. *Pak J Surg* 1993;9:120-3.

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