



General Surgery

A STUDY ON CLINICO-PATHOLOGICAL EVALUATION OF CERVICAL LYMPHADENOPATHY AT A TERTIARY CARE CENTRE

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ABSTRACT**Aims and objectives:**

- 1.To study the various clinical presentations of cervical lymphadenopathy.
- 2.To correlate pathological findings with the clinical diagnosis.
- 3.To study the management, outcome, and clinical behavior of cervical lymph nodes and follow-up.

Materials and methods:

Patients admitted with neck swelling in PES Hospital, Kuppam in Department of General Surgery from May 2021 to APRIL 2022 were included in this study, 100 patients were studied during this period. **Inclusion Criteria** 1. Patients with cervical lymph node enlargement with age more than 12 years of age.

Exclusion Criteria

1. Patients of age less than 12 years.
2. Patients in whom FNAC and/or biopsy of a node could not be carried out were excluded.

Results:

Majority of the cases in this study had non-neoplastic causes for cervical lymphadenopathy in which reactive lymphadenitis is most common. Male to female ratio of 0.9:1 is noted with most cases between 12 and 30 years. Upper jugular group of lymph nodes was most commonly affected in tuberculosis and reactive lymphadenitis. In lymphomas submandibular and jugular groups of lymph nodes are most commonly involved. Variable results were noted among the groups of lesions, with regard to local characteristics like number, laterality, mobility and involvement of other group of lymph nodes, etc. FNAC is being inexpensive, quick in getting the results and easy to perform. Hence it is the most important and essential investigation. **Conclusion:** Clinical symptoms in cervical lymphadenopathy are of limited significance because clinical behavior can be highly variable. As cervical lymphadenopathy is an important disease, it always calls for meticulous attention, analysis and treatment. FNAC is found to be a frontline investigation of choice with biopsy and histopathological examination done for confirmation. Most of the non-neoplastic lesions are medically curable with limited role for surgery.

KEYWORDS : Cervical lymphadenopathy; FNAC; Histopathological examination.**INTRODUCTION:**

Lymph nodes are organs of the immune system, distributed throughout the body and linked by lymphatic vessels. There are approximately 600-800 lymph nodes in the body¹. No fewer than 1/3 rd. of them that is 300 of them lie in the neck. Any abnormality in the size, consistency, and number of lymph nodes is defined as lymphadenopathy⁸. The enlargement of lymph nodes is significant as it indicates many etiological conditions such as Malignancies, infections, autoimmune disorders, iatrogenic, and miscellaneous, and it is also an index of the spread of infection and malignancy². Enlargement of the lymph nodes more than 1cm is a clinical manifestation of regional or systemic disease and helps as an excellent clue to the underlying disease³. Depending upon the duration of the presentation, they can be acute (2 weeks), sub-acute (2-4 weeks), and chronic (>6weeks)⁴.

Although the reasonably accurate diagnosis can be made clinically, various modalities of investigations such as cytology by fine-needle aspiration, histopathological by excision biopsy⁵. Each of them has their own merits and demerits.

Traditionally, open biopsy and its histopathological study are the mainstay for diagnosis of cervical lymphadenopathy. Hence the main intention of this study is to know the incidence, varying modes of presentation and, different modalities of diagnosis⁶. The various trends observed in the present study are correlated with recent literature, and conclusions were made regarding the treatment and prognosis setup set up and to identify factors that can help in better management of these cases, thus helping to improve the prognosis and management care⁷.

The evaluation of the enlargement of the lymph node in the neck is not an easy task. It is a challenge for the clinician to assess their clinical behavior and come to a final diagnosis. These diseases, which can be neoplastic also need correct diagnosis for further management.

The study intends to access systematically the various pathological

conditions presenting as enlarged lymph nodes in the neck, also the various modalities of clinical presentation and behavior of these conditions. Appropriate investigations have also been studied.

AIMS AND OBJECTIVES:

- 1.To study the various clinical presentations of cervical lymphadenopathy
2. To correlate pathological findings with the clinical diagnosis
3. To study the management, outcome, and clinical behavior of cervical lymph nodes and follow-up.

MATERIALS AND METHODS:

Out-patients and In-patients from the Department of General Surgery, PESIMSR, Kuppam.. The patient was examined systematically giving priority to local examination. This was a prospective study conducted during the period of one-year from May 2021 to April 2022

Inclusion Criteria

1. Patients with cervical lymph node enlargement with age more than 12 years of age.

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STATISTICAL ANALYSIS OF DATA:

The data was entered into MS Excel & further analyzed using SPSS version 23. For Descriptive statistics, tables and figures were used to present the data in frequencies and percentages.

RESULTS:

Table 1: The number and percentage of non-neoplastic and neoplastic lesions

	Number of cases	Percentage
Non-neoplastic	87	87
Neoplastic	13	13
Total	100	100

Table 2: Histopathological diagnosis

Histopathological	Number of cases	Percentage
Reactive lymphadenopathy	47	47
Tuberculosis	40	40
secondaries	9	8
Hodgkins lymphoma	1	1
Non-Hodgkins lymphoma	3	3
Total	100	100

Table 3: Incidence of Constitutional symptoms:

Symptoms	Number of cases
Neck swelling	100
Pain	16
Fever	14
Cough	13
Loss of appetite	12
Loss of weight	14
Difficulty in swallowing	2
Change in voice	2

Table 4: Type of lymphoma

Types of lymphoma	Number of cases	Percentage
Non-Hodgkins	3	75
Hodgkins	1	25
Total	4	100

Table 5: Laterality of cervical nodes among the study participants

Laterality of cervical lymph nodes	Reactive lymphadenopathy	TB	secondaries	Total
Left	17	17	03	35
Right	29	22	04	57
Bilateral	02	04	02	8
Total	48	44	08	100

Table 6: Duration of cervical lymph nodes:

Duration of the presence of cervical nodes	RLN	TB	Secondaries	total
< 1 month	14	13	02	29
1-6 months	23	20	05	48
7-12 months	06	06	01	13
13-24 months	03	03	0	06
>2 years	02	02	0	04

Table 7: Clinical diagnosis of cervical nodes among the study participants

Classification of cervical nodes	Frequency	Percentage (%)
RLN	48	48.0
TB	44	44.0
SEC	08	8.0
TOTAL	100	100

Table 8: Distribution of Primary malignancies in secondary neck

The primary site of malignancy	Hpe pattern	Number of cases
Larynx	SCC CA	3
Esophagus	ADENO CA	1
Stomach	ADENO CA	1
Thyroid	PAPILLARY CA THYROID	1
Unknown	ADENO	2
	SCC	1

Table 9: Site distribution cervical lymphadenitis:

site	Reactive lymphadenopathy	Tubercular lymphadenopathy	Secondaries	Lymphoma	Total
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level I	9	5	3	2	19
level II	15	15	2	0	32
level III	8	4	1	0	13
level IV	7	2	1	1	11
level V	8	14	2	1	25
level VI	0	0	0	0	0

DISCUSSION:

The discussion is drawn based on analysis and observations made regarding presenting symptoms, clinical behavior, investigations, signs, management, and postoperative events in 100 cases of cervical lymph node enlargement attending to OPD and inpatient of PES Hospital attached to PES Medical College and Research Institute, kuppam during the period of MAY 2021 to APRIL 2022.

In this present study, which includes 100 cases of cervical lymphadenopathy, 87 were non-neoplastic lesions and 13 were neoplastic lesions. The incidence of non-neoplastic and neoplastic lesions can be compared to a study done by Shafullah and Syed Humayun Shah et al., 8 in which the incidence of non-neoplastic and neoplastic lesions was 90.6% and 9.4% respectively. In the present study, reactive lymphadenitis accounted for 47% of cases, and 40% turned out to be Tubercular lymphadenitis. Among the neoplastic lesions, malignant secondaries which included the larynx, oesophagus, thyroid, and unknown accounted for 9% while non-Hodgkin's lymphoma and Hodgkin's lymphoma accounted for 3% and 1% respectively. The observation made by Jha BC et al. 9 who studied 94 cases, of which tuberculosis was confirmed in 63.8% of cases.

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CONCLUSION:

The clinical material consists of patients consecutively selected with history of cervical lymphadenopathy, who came to surgical OPD and who were admitted in wards of PES. The hospital attached to PESIMSR. One hundred consecutive cases were selected and they were personally studied in the present study. Of the 100 cases, reactive lymphadenopathy had the maximum incidence of 47% followed by tubercular lymphadenitis (40%), secondaries (9%), and lymphomas (4%). Overall age at presentation was a maximum between 12 years and 30 years followed by 31-40 years. In investigations, Fine Needle Aspiration Cytology was found to be accurate with 75.5% accuracy for the diagnosis of tuberculosis. Few patients were diagnosed with non-specific lymphadenopathy which was later confirmed by biopsy to have either tuberculosis or reactive lymphadenitis. In the metastatic lymph node, the method of diagnosis was Fine Needle Aspiration Cytology and two patients were treated with surgery. One patient expired before the referral. Rest 6 cases were referred to the oncologic center and they did not come for follow-up. Lymphomas were diagnosed by Fine Needle Aspiration Cytology and confirmed with excision biopsy. Hodgkin's lymphomas were treated with chemotherapy and were followed up regularly till the study concluded. No mortality was noted.

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