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Original Research Article

A Clinicopathological Study on Cervical Lymphadenopathy

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Abstract:

Background: Lymphadenopathy is a common clinical presentation. It may be a primary or secondary manifestation of numerous diseases, characterized by abnormalities in size and character of lymph nodes occurring as a result of invasion or propagation of either inflammatory or neoplastic cells into lymph node. Clinical evaluation, aspiration cytology and open biopsy are some of the methods to diagnose the cause of cervical Lymphadenopathy.

Aims & Objectives: To study the prevalence of cervical Lymphadenopathy in respect to age and sex, various clinical presentations, and to correlate the pathological findings with the clinical diagnosis.

Methodology: The study was conducted in 50 selected patients presented with neck swelling in GGH, Kurnool during one year period from Jan 2022 to Jan 2023

Results & Conclusion: 33 patients (66%) had lymphadenitis caused by tuberculosis, 2 patients (4%) had lymphomas, Reactive lymphadenitis in 5, malignant secondaries in 5, and chronic non-specific lymphadenitis in 5. The age range of 31 to 40 years had the highest percentage of patients (36%). The study included 23 female patients and 27 male patients. Only 15% of those who developed tubercular lymphadenitis had a history of the condition. The level 2 lymph nodes were enlarged in the majority of cases of tubercular lymphadenitis (48.48% of cases with tuberculosis), and numerous lymph node groups were involved in 33.33% of cases. Multiple levels of the neck nodes were involved in every case of lymphoma. One of the two instances with histological confirmation is Hodgkin's lymphoma, whereas the other is not. The most typical cause of cervical Lymphadenopathy is tuberculosis. The conclusive inquiry involves an open biopsy and a histological study.

Keywords: Cervical Lymphadenopathy, Clinical Manifestations, Histo Pathology.

Introduction

Clinically, Lymphadenopathy is frequently seen. It could be a primary or subsequent symptom of many illnesses. The abnormalities in the shape and function of lymph nodes that come from the invasion or spread of either inflammatory cells or cancerous cells into lymph nodes are known as Lymphadenopathy. Lymph nodes are found along lymphatic vessels and serve as filters to stop the movement of cancerous and inflammatory cells. Around 300 of the human body's 800 or more lymph nodes are found in the neck. [1,2,3]

The most frequent causes of widespread Lymphadenopathy include Hodgkin's disease and tuberculosis. [4] A typical manifestation of tuberculosis is painless Lymphadenopathy with gradual start in the superficial lymph nodes.

A little over 2.8% of all newly diagnosed cancers are head and neck cancers. Nearly 3 to 5% of these patients have cervical lymph node metastases from an unidentified original tumour. One way to identify the source of cervical Lymphadenopathy is through clinical examination, aspiration cytology, or an open biopsy.

The current gold standard for cervical Lymphadenopathy diagnosis is an open biopsy together with a histopathological evaluation. [5-11]

Aims & Objectives

1. To research the age and sex-related prevalence of cervical Lymphadenopathy
2. To research the many clinical forms of cervical Lymphadenopathy.
3. To compare the clinical diagnosis to the pathological results.

Patients and Methods

Patients from the General Surgery department of the Government Medical College in Kurnool who are both inpatients and outpatients during Jan 2022 to Jan 2023 were included in the current study. 50

patients were examined for cervical Lymphadenopathy as a part of the current study.

Patients older than 12 years old, of both sexes, who have had neck swelling for longer than three weeks, presented to the general surgical OPD were included. Patients who have recently experienced an acute lymphadenitis episode are excluded. FNAC and open biopsies were performed on all of the patients.

Results

50 patients were examined for cervical Lymphadenopathy as part of the current study. FNAC and open biopsies were performed on all of the patients. The most frequent diagnosis among the 50 patients who participated in the study was tubercular lymphadenitis, which was found in 33 cases (66%). In five individuals (10%), reactive lymphadenitis was identified. In 5 patients (10%), chronic non-specific lymphadenitis was observed. Five patients (10%) have secondary malignancies. Two patients (4%) have lymphomas.

Table 1: Percentage of Non-Neoplastic and Neoplastic Lesions

	Number of cases	Percentage
Non-neoplastic cases	43	86%
Neoplastic cases	7	14%
Total	50	100%

Table 2: Table Showing Histopathological Diagnosis

Histopathological Diagnosis	Number of cases	Percentage
Tubercular lymphadenitis	33	66%
Reactive lymphadenitis	5	10%
Chronic nonspecific lymphadenitis	5	10%
Secondaries	5	10%
Hodgkin's lymphoma	1	2%
Non-Hodgkin's lymphoma	1	2%
Total	50	100%

Table 3: Incidence of Presenting Symptoms

Presenting Symptoms	Number of cases	Percentage
Neck swelling	44	88%
Fever	19	38%
Change of voice	1	2%
Cough	13	26%
Malaise	7	14%
Loss of appetite	2	4%
Loss of weight	10	20%
Total	50	100%

Table 4: Site Specific Lymph Node Involvement

Site	Tubercular Lymphadenitis	Lymphomas
Level 1	1(3.03%)	0
Level 2	16(48.48%)	0
Level 3	2(6.06%)	0
Level 4	1(3.03%)	0
Level 5	1(3.03%)	0
Level 6	1(3.03%)	0
>1 site in neck	11(33.33%)	2(100%)
Total	33	2

Table 5: History of Exposure to Tb in Patients with Tb Lymphadenitis

History of contact with tuberculosis	Number	Percentage
Positive	5	15%
Negative	28	85%
Total	33	100%

Discussion

All 50 patients participating in the current trial get FNAC as well as open biopsies. 33 patients (66% of the total) had lymphadenitis caused by tuberculosis, whereas 2 patients (4%) had lymphomas. In a study done by Guruswamy GH at et [12] Cervical lymphadenopathy secondary to nonneoplastic causes were 50.77%, Veetil et al, most of the lesions were of non-neoplastic of origin comprising of 76%. [13]

In a study done by Motiwala et al, [14] concluded that cervical lymphadenopathy due to non-neoplastic causes (89.56%) was more common than neoplastic causes. Additional diagnoses included reactive lymphadenitis in 5, malignant secondaries in 5, and chronic non-specific lymphadenitis in 5. In a study by Veetil et al, [13] most common cause of cervical Lymphadenopathy was tuberculosis (44%) followed by reactive lymphadenitis (30%). Motiwala et al [14] found that tuberculosis was the most common cause of cervical lymphadenopathy in 54.78% followed by the reactive lymphadenitis in 22.61%.

The most typical cause of cervical Lymphadenopathy is tuberculosis. The age range of 31 to 40 years had the highest percentage of patients (18 cases or 36%), followed by 21 to 30 years (16 cases or 32%). The study included 23 female patients and 27 male patients. Consequently, there is a 1.17:1 male to female ratio. Only 15% of those who developed tuberculous lymphadenitis had a history of the condition.

The level 2 lymph nodes were enlarged in the majority of cases of tubercular lymphadenitis (48.48% of cases with tuberculosis), and numerous lymph node groups were involved in 33.33% of cases. Multiple levels of the neck nodes were involved in every case of lymphoma. In a study done by Jha et al, level II group was most involved in tuberculosis. [15] Baskota et al found wherein tuberculosis level V lymph nodes were most commonly involved in tuberculosis (33.9%) and in secondaries level II group was most commonly involved (50%) similarly in lymphomas level II group was involved. [16] One of the two instances with histological confirmation is Hodgkin's lymphoma, whereas the other is not. The conclusive inquiry involves an open biopsy and a histological study.

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