

Etiopathological Study of Cervical Lymphadenopathy in 100 Rural Patients Attending Tertiary Care Hospital

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Abstract:-

➤ Background:

The term lymphadenopathy refers to nodes that are abnormal in size, consistency or number. Cervical lymphadenopathy is one of the common and important presentations of the underlying pathology of the head and neck region which has large number of differential diagnosis like neoplasms, infections (specific and nonspecific) and in immune deficiency disorders and also the rare disorders like Inflammatory pseudotumour (Plasma cell granuloma)[1].

According to the onset ,it can be an acute (<2 wks), subacute(2-6wks) or chronic(>6wks)[3]

➤ Methods:

For all the patients routine haematological investigations , USG,neck, FNAC of enlarged cervical lymph nodes, serological tests and other relevant tests was performed. Mode of onset and duration of enlarged cervical lymph nodes, associated symptoms with it like pain, fever, cough, throat pain, difficulty in swallowing, voice change, ear or nasal symptoms, complaints related to skin infections, scalp infections, associated systemic illness, history of contact with open case of tuberculosis, history of smoking or tobacco chewing, history of alcohol intake were all noted. General physical examination was done and vitals were recorded. Complete examination of the enlarged cervical lymph node was done, it's location, number, size, tenderness, consistency, mobility and skin over the swelling were all examined. The areas drained by enlarged nodes were also examined thoroughly to identify the focus of infection.

➤ Results:

Out of 100 cases, 37% cases were diagnosed as Reactive lymphadenitis ,17% cases of metastatic deposits of squamous cell type in cervical lymph nodes with known primary, (3 cases of Carcinoma of Tongue, 5 cases of hypopharyngeal/laryngeal cancer, 2 cases of oropharyngeal cancer, 1 case of esophageal cancer) followed by 4% cases of Granulomatous 14% cases of Tubercular lymphadenitis ,13% cervical lymphadenopathy, 5% cases of Metastasis of unknown origin(neck secondaries with unknown primary),4%

cases of acute suppurative lymphadenitis, 3 cases of Hodgkin's lymphoma, 3 cases of Non-Hodgkin's lymphoma and 1 case of leukemia.

➤ Conclusion:-

Cervical lymphadenopathy is a frequently encountered problem in all age groups. It requires detailed history and clinical examination to arrive at an etiological diagnosis. Most of them are associated with the infections in the draining areas of that particular group of lymph nodes .It shows features of reactive lymphadenitis and treatment by a course of antibiotics is sufficient.

Keywords: Cervical Lymphadenopathy, Tubercular Lymphadenopathy, Metastatic Deposits.

I. INTRODUCTION

Chronic cervical lymphadenopathy is defined as lymph node measuring more than 1cm in diameter and that does not resolve by 6 weeks. It is classified as "generalized" if lymph nodes are enlarged in two or more noncontiguous areas or "localized" if only one area is involved. This condition has multiple etiologies such as infection, neoplasia and autoimmune disease[3] Lymph node tuberculosis is a most comm type of extrapulmonary tuberculosis in India and is probably the commonest cause of chronic lymphadenitis in children. Head and neck cancers account for 2.8% of all newly discovered cancers. Metastatic carcinoma within cervical lymph nodes with an unknown primary tumour site accounts for 3% to 5% of all head and neck cancers[4]

The gold-standard biopsy modality in the workup of a neck mass is fine- needle aspiration (FNA). The sensitivity and specificity of FNA for both pediatric and adult head and neck masses have been reported to be approximately 97% when diagnostic material is obtained[5]

➤ Aims and Objectives:

To arrive at a diagnosis in order to administer proper treatment with the assistance of routine haematological investigations , USG neck, FNAC of enlarged cervical lymph nodes, serological tests and other relevant tests.

II. TYPE OF STUDY: PROSPECTIVE STUDY

➤ *Source Of Data:*

Patients attending the out patient department or admitted for inpatient care in the department of ENT with cervical lymphadenopathy at Kurnool medical college and general tertiary care hospital , Kurnool , Andhra Pradesh.

➤ *Period Of Study :*

Over a period of 18 months (FEBRUARY 2021- AUGUST2022).

➤ *Sample Size :300*

➤ *Method of Collection of Data:*

Patients of either sex and age from 2 to 80 years

• *Inclusion Criteria:*

- ✓ Patients with lymphadenopathy measuring >1cm in cervical region. history of cervical lymphadenopathy for >6weeks without any age or sex bias.

• *Eexclusion Criteria:*

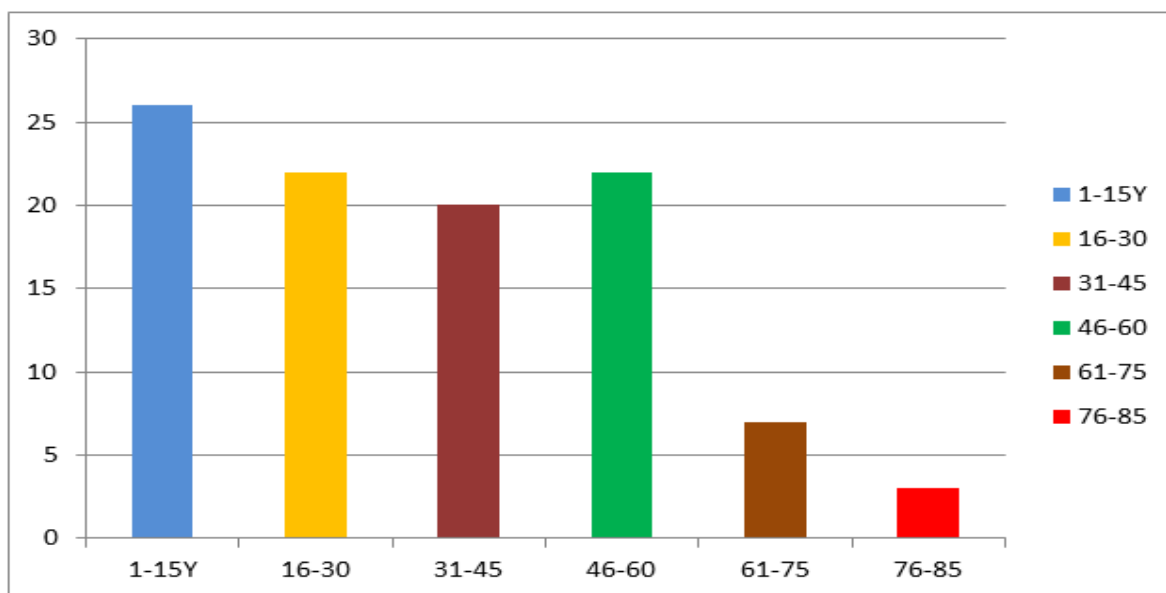
- ✓ Neck swellings other than cervical lymphadenopathy.osed cases and on treatment, like immunocompromised cases-HIV positive cases on ART, TB cases on ATT, known carcinoma cases and on different modalities of treatment.

III. RESULTS

Majority of the cases having cervical lymphadenopathy were in the age group of 1-15 years(26%), followed by 16-30years (22%), 46-60years(22%) ,35-45 Years(20%) and the least in>75years age group(3%). Youngest case in our study was of 2 year old girl.

Table 1 Age Wise Distribution of Patients

	Male	Female	Frequency	Percent
1-15(YEARS)	11	15	26	26
16-30(YEARS)	10	12	22	22
31-45(YEARS)	13	7	20	20
46-60(YEARS)	15	7	22	22
61-75(YEARS)	5	2	7	7
76-85(YEARS)	3	0	3	3
TOTAL	57	43	100	100

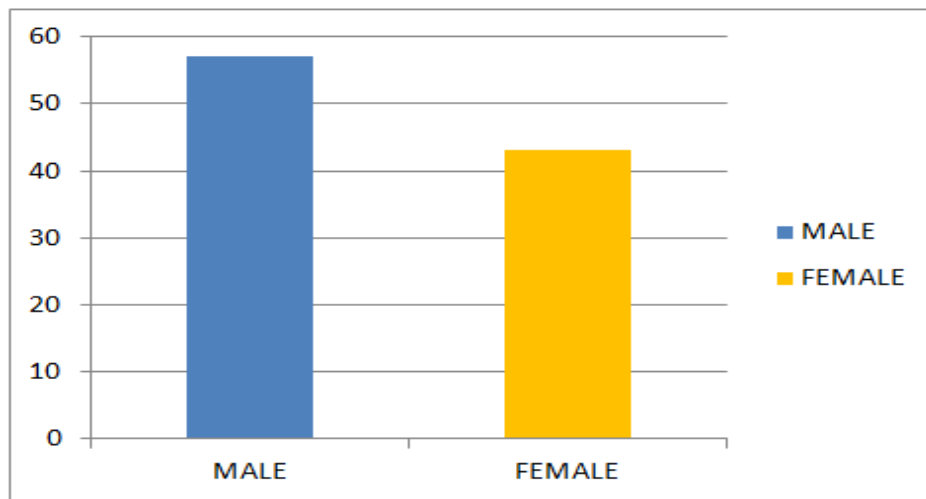


Graph 1 Age Wise Distribution of Patients

Out of 100 cases lymphadenopathy was found more in males (57%) compared to female (43%) cases.

Table 2 Gender Wise Distribution of Patients

Gender	Frequency	Percentage
Male	57	57
Female	43	43
Total	100	100

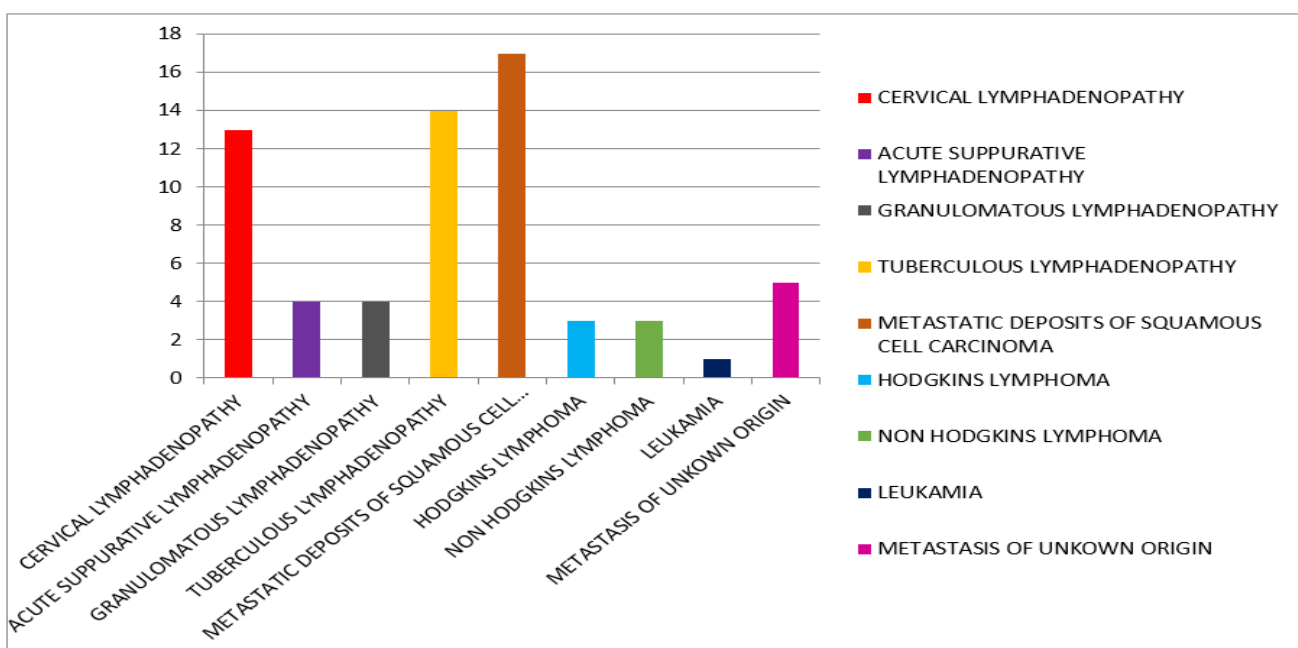


Graph 2 Gender Wise Distribution of Patients

Out of 100 cases, 37% cases were diagnosed as Reactive lymphadenitis ,17% cases of metastatic deposits of squamous cell type in cervical lymph nodes with known primary, (3 cases of Carcinoma of Tongue, 5 cases of hypopharyngeal/laryngeal cancer, 2 cases of oropharyngeal cancer, 1 case of esophageal cancer) followed by 4% cases of Granulomatous 14% cases of Tubercular lymphadenitis ,13% cervical lymphadenopathy, 5% cases of Metastasis of unknown origin(neck secondaries with unknown primary),4% cases of acute suppurative lymphadenitis, 3 cases of Hodgkin’s lymphoma, 3 cases of Non-Hodgkin’s lymphoma and 1 case of leukemia.

Table 3 Distribution of Patients Based on Diagnosis

	MALE	FEMALE	FREQUENCY	PERCENT
Reactive Lymphadenitis	19	18	37	37
Cervical Lymphadenopathy	4	9	13	13
Acute Suppurative Lymphadenitis	1	3	4	4
Granulomatous Lymphadenitis	3	1	4	4
Tubercular Lymphadenitis	11	3	14	14
Metastatic Deposits Of Squamous Cell Carcinoma	14	3	17	17
Hodgkins Lymphoma	2	1	3	3
Non Hodgkins Lymphoma	2	1	3	3
Leukamia	0	1	1	1
Metastasis Of Unknown Origin	1	4	5	5



Graph 3 Distribution of Patients Based on Diagnosis

IV. DISCUSSION

About 80% of the population in many Asian and African countries test positive in tuberculin tests, while only 5-10% of the US population test positive. Hopes of totally controlling the disease has been dramatically dampened because of a number of factors including the difficulty of developing an effective vaccine , expensive and time consuming diagnostic process, necessity of many months of treatment, increase in HIV associated tuberculosis and the emergence of drug-resistance cases in the 1980s . In those with HIV, tuberculosis occurs in more than 50% of cases¹². In our study, HIV was incidentally detected in our study in 8 cases with tubercular lymphadenopathy.[6]

It has been reported that tuberculosis persists to be a ubiquitous health problem in developing countries affecting around 1.5% of Indian population. Tuberculous adenitis is the most common cause of cervical lymphadenitis and involves upper and anterior deep cervical nodes followed by sub-mandibular and sub-mental lymph nodes. The condition is referred to as “scrofula” and primarily affects the cervical lymph nodes, followed by axillary and inguinal nodes. Associated systemic symptoms include unexplained weight loss, malaise, fever, cough or hemoptysis. T.B lymph nodes may be multiple, matted, hard to fluctuant with draining sinuses, however, in the early stages; the consistency of the nodes may be discrete, firm, and rubbery. Jones and Campbell (1962) described stages of TB lymphadenitis as follows: enlarged, firm, mobile, discrete nodes; large rubbery nodes fixed to surrounding tissue; central softening abscess; collar stud formation and sinus tract formation. Only 10 subjects had reactive lymphadenitis, which may be attributed to bacterial, viral infections, dental infections and surgical procedures in the head and neck region. 10 subjects had nonspecific lymphadenitis, which is commonly seen in children and may occur secondary to bacterial infections (Staphylococcus aureus and beta hemolytic Streptococcus); viral infections or inflammation of the draining sites or direct inflammation of the lymph nodes. These are self resolving and do not require treatment.[7]

alcohol consumption, cigarette smoking, and risk of developing head and neck cancer found that alcohol consumption and cigarette smoking were strongly, independently associated with an increased risk of head and neck cancer . The strength of these associations however differed between sub head and neck cancer types; Oral cavity cancer most strongly associated with alcohol consumption but most weakly with cigarette smoking, whereas laryngeal cancer was not statistically significantly associated with alcohol consumption. For head and neck cancer overall, a multiplicative interaction between categories of alcohol consumption and cigarette smoking was found. Alcoholic beverages and acetaldehyde, the main metabolite of ethanol, are classified as a class I carcinogen . It is plausible that alcohol – after being metabolized – acts both directly and indirectly in HNC carcinogenesis, alcohol acts as a solvent for other possible carcinogens, such as tobacco carcinogens[8]

FNAC is a simple, inexpensive, relatively painless, rapid, repeatable, and reliable method of investigation for lymphadenopathy, especially in OPDs, peripheral hospitals, and dispensaries, thus reducing the incidence of surgery and therefore, bed occupancy. However, it is not a substitute for conventional surgical pathology but is complimentary to it.[9]

➤ *Clinical Photographs:*
Reactive Lymphadenitis Patient



Fig 1 Clinical Picture of Reactive Lymphadenitis

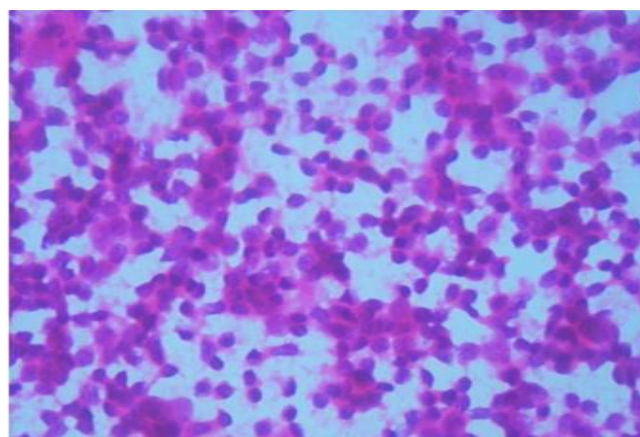


Fig 2 Histopathological Picture of Reactive Lymphadenitis Showing Lymphocytes



Fig 3 Clinical Picture of Neck Secondaries (Squamous Cell Carcinoma)

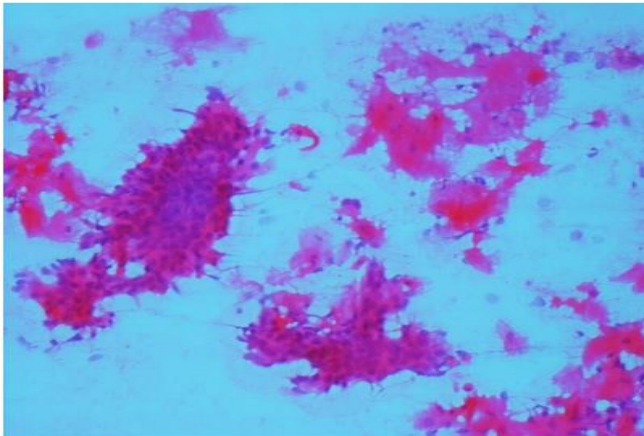


Fig 4 Histopathological Picture of Neck Secondaries Showing Atypical Cells

V. CONCLUSION

Cervical lymphadenopathy is a frequently encountered problem in all age groups. It requires detailed history and clinical examination to arrive at an etiological diagnosis. Most of them are associated with the infections in the draining areas of that particular group of lymph nodes. It shows features of reactive lymphadenitis and treatment by a course of antibiotics is sufficient. It may be associated with systemic illnesses also. Other conditions associated with enlarged nodes are bacterial infections like tuberculosis, viral infections, other granulomatous infections, lymphomas, leukaemias, metastatic deposits in cervical lymph nodes from known or unknown primary tumour. Enlarged neck node is a common presentation in head and neck cancers. It may be due to metastasis which carries poor prognosis. So it has to be evaluated thoroughly, which indeed helps in early detection and treatment. Detailed investigations including CBC, ESR, CXR, USG neck, FNAC of enlarged cervical node, Mantoux test and other serological tests for the diagnosis of viral infections are needed. CECT neck to know the benign or malignant nature of involved group of lymph nodes, Excision biopsy, Pan endoscopy, CECT chest, USG abdomen has to be done in cases of metastatic deposits in cervical lymph nodes to know the primary site of tumour.

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