



A Clinical Study of Chronic Cervical Lymphadenopathy in Government Medical College & General Hospital (RIMS), Kadapa

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Abstract

Background: Ever since the documentation of functions of lymph nodes, the diseases of lymph nodes are understood in a better way. Varied number of disorders, ranging from trivial inflammatory conditions to serious malignant conditions affect lymph nodes. Cervical lymphadenopathy also forms the commonest cause of neck swellings. Cervical lymphadenopathy is the commonest region for specific lymphadenopathy. With this background, we have conducted a study on cervical lymphadenopathy in our institute to find out the various causes of cervical lymphadenopathy in our area.

Methods: The present study is a prospective, observational study conducted on fifty patients who attended to Government General Hospital/RIMS, Kadapa during a period of 2 years from January 2016 to December 2017. All the patient who presented with cervical lymphadenopathy were included in the study. A detailed history of the symptoms, thorough clinical examination and investigations were done, which were analyzed.

Results: Benign lymphadenopathy was the commonest cause of cervical lymphadenopathy accounting for 78% of all the cases. Tuberculous lymphadenitis was commonest cause of benign cervical lymphadenopathy accounting for 48% of benign causes and 38% of total cases. Primary tumours of lymph nodes constituted 14% and metastatic lymphadenopathy was the cause in 8% of the total cases.

Conclusion: Tuberculosis continues to be the commonest cause of cervical lymphadenopathy in our setup, the common age of presentation being in 2nd and 3rd decades. Secondaries in the neck occur in elderly age group. Provisional diagnosis of tubercular adenitis did not closely correlate with histopathological diagnosis. Clinical diagnosis of secondaries neck was closely associated with fine needle aspiration cytology (FNAC) report. FNAC is safe, quick and cost-effective procedure and has high patient acceptance. It is a good screening procedure for tuberculous lymphadenitis and secondaries of the neck.

Keywords: Cervical Lymphadenopathy FNAC, Secondaries of Neck, Histopathology.

Background

Ever since the documentation of functions of lymph nodes, the diseases of lymph nodes are

understood in a better way. Varied number of disorders, ranging from trivial inflammatory conditions to serious malignant conditions affect

lymph nodes. Cervical lymphadenopathy is the enlargement of neck lymph nodes. Of all the lymph node groups, cervical group is the most commonly involved for any diseases, for that matter which affects lymph nodes. They drain the upper respiratory tract and alimentary tract. These two epithelial layers are prone for repeated infections as well as fast multiplying epithelial sites are prone for infection.

As the causes of cervical lymphadenopathy range from benign inflammatory condition to malignancy, identifying the underlying cause in a given patient is of utmost importance for the treatment of the same. With this background, we have conducted a study on cervical lymphadenopathy in our institute to find out the various causes of cervical lymphadenopathy in our area. The present study aimed at understanding the incidence of various diseases, their age and sex pattern, common group of lymph nodes involved, correlation between clinical diagnosis and FNAC.

Methods

The present study is a prospective, observational study conducted on fifty patients with cervical lymphadenopathy who attended to Government General Hospital / RIMS, Kadapa to find out the various causes of cervical lymphadenopathy during a period of 2 years from January 2016 to December 2017.

Inclusion Criteria

- Lymphadenopathy of more than 4 weeks duration either with isolated or generalized lymphadenopathy.
- Age more than 15 years.

Exclusion Criteria

- Lymphadenopathy of less than 4 weeks duration.
- Lymph nodes of size less than 1cm.
- Age less than 15 years.

A detailed history of patients was taken. This was followed by thorough general, local and systemic examination. Routine biochemical investigations like complete blood picture (CBP), renal function tests (RFT), liver function tests (LFT) and

serological tests for human immunodeficiency virus (HIV), hepatitis B surface antigen (HbsAg) were done. FNAC was done in all patients.

Results

Fifty cases of cervical lymphadenopathy were studied in detail for a period of 2 years and the different causes for 50 cases are tabulated in chart I. The age and sex distribution, the duration of symptoms, associated symptoms for various causes, group of lymph nodes involved, side of the neck involved, correlation of provisional diagnosis with final diagnosis (HPE), and correlation of FNAC with histopathological diagnosis are all tabulated in different tables and charts.

Following are the results obtained.

Causes

Benign lymphadenopathy was commonest cause of cervical lymphadenopathy forming 78%, out of which tuberculosis lymphadenitis was the commonest cause accounting for 38%. Primary tumors of lymph nodes constituted 14%. Metastatic lymphadenopathy constituted for 08%.

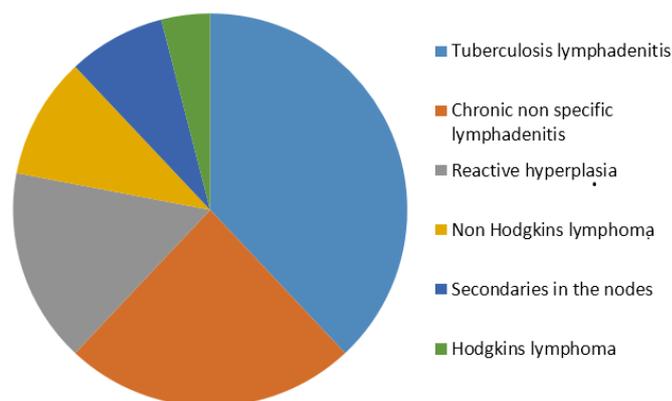


Chart -1: Causes of Cervical Lymphadenopathy

Age Distribution

Cervical lymphadenopathy was more common in 2nd and 3rd decades accounting for 54% and least common is 7th & 8th decade accounting for 10%. Malignancy was more common after 5th decade.

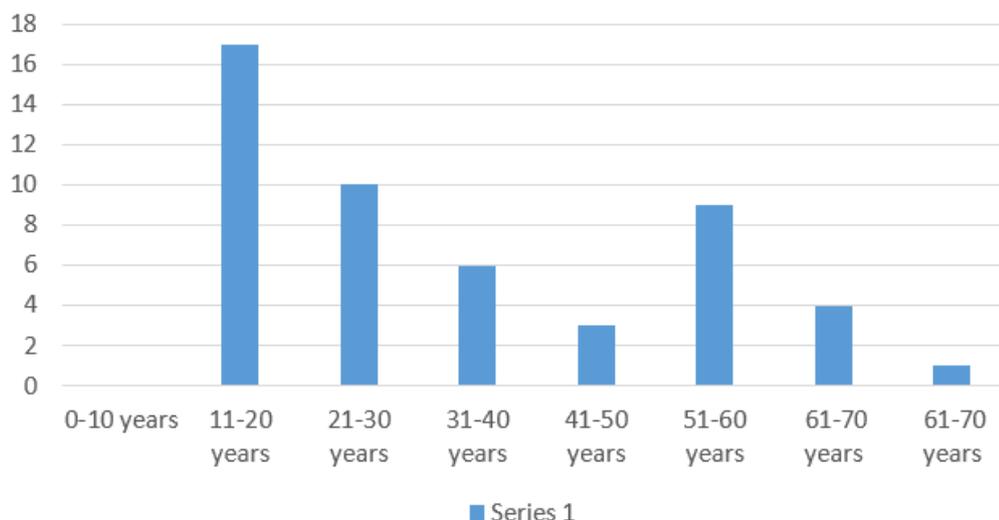


Chart - 2: Age Distribution of Cervical Lymphadenopathy

Sex Distribution

Cervical lymphadenopathy was more common in males accounting 60% of the total cases with females constituting only 40%. Benign conditions

were more common in females, especially TB lymphadenitis. Malignant conditions were more common in males.

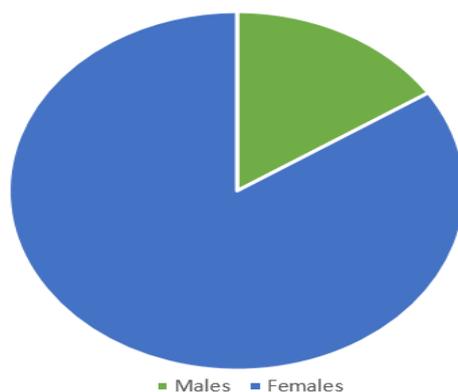


Chart – 3: Sex Distribution of Cervical Lymphadenopathy

Side of the Neck Involved

In our study conducted on 50 patients, right side of the neck was involved in 26 cases accounting for 52% and left side was involved in 17 cases accounting for 34%. Bilateral cervical

lymphadenopathy was observed in 7 patients in our study. Other groups of lymph nodes were involved in one patient of Hodgkin’s Lymphoma and other patient of Non-Hodgkin’s Lymphoma.

Table-1: Side of the Neck and Other Group of Lymph Nodes of Various Diseases

Disease	Right Side	Left Side	Bilateral	Other group
TB Lymphadenitis	12	04	03	-
Chronic Non-Specific Lymphadenitis	07	05	00	-
Reactive Hyperplasia	03	05	00	-
Hodgkin’s Lymphoma	01	00	01	01
Non-Hodgkin’s Lymphoma	01	01	03	01
Secondaries	02	02	00	-
Total	26	17	07	02

Involvement of Various Groups of Lymph Nodes in Various Diseases

Table-2: Involvement of Various Groups of Lymph Nodes in Various Diseases

Disease	Sites of Lymph Node Groups				
	Sub Mandibular	Jugulo Digastric	Jagulo Omohyoid	Supra Clavicular	Multiple Nodes
TB Lymphadenitis	03	13	-	-	03
Chronic non-Specific Lymphadenitis	09	01	-	-	02
Reactive Hyperplasia	03	03	-	-	02
Hodgkin's Lymphoma	-	-	01	-	01
Non-Hodgkin Lymphoma	-	-	01	-	04
Secondaries	-	-	01	01	02
Total	15	17	03	01	14

In our study, Sub mandibular and Jugulodigastric lymph node were involved in 64% of pts, multiple nodes were involved in 28% of patients and Jugulo omohyoid was involved in just 06%. In TB adenitis patients 69% of Jugulodigastric lymph

nodes were involved. Jugulo-omohyoid was involved mostly in neoplastic diseases of lymph nodes. In chronic nonspecific lymphadenopathy submandibular was involved in 75% of pts.

Correlation between Provisional Clinical Diagnosis and Final Diagnosis (Histopathological Diagnosis)

Table-3: Correlation between Provisional Clinical Diagnosis and Final Diagnosis (Histopathological Diagnosis)

Disease			HPE					
	NO.	%	TB	Chronic Non-Sp. Adenitis	Reactive Hyper plasia	Hodgkin's	NHL	Secondaries
TB Lymphadenitis	25	50	16	04	03	-	02	-
Chronic Non-Specific Lymphadenitis	14	28	03	07	04	-	-	-
Lymphoma	07	14	-	01	01	02	03	-
Secondaries	04	08	-	-	-	-	-	04
Total	50	100	19	12	08	02	05	04

In our study, 50% of the total cases were provisionally diagnosed as tuberculosis lymphadenitis, out of which HPE proved only 32% cases. 28% of total case were diagnosed as chronic nonspecific lymphadenitis out of which

HPE proved 14% of cases.14% of total cases were diagnosed as lymphomas out of which HPE proved 10% of cases.08% of total cases were diagnosed as secondary lymphadenopathy out of which HPE proved 08% of total cases.

Correlation of FNAC of the Various Diseases

Table-4: Correlation of FNAC of the Various Diseases

Disease	FNAC						
	NO.	TB	Chronic Non-Sp. Adenitis	Reactive Hyper Plasia	Hodgkin's	NHL	Secondaries
TB Lymphadenitis	19	16	03	-	-	-	-
Chronic Non-Specific Lymphadenitis	12	-	11	01	-	-	-
Reactive Hyperplasia	08	-	06	02	-	-	-
Hodgkin's Lymphoma	02	01	-	01	-	-	-
Non-Hodgkin Lymphoma	05	-	01	02	-	02	-
Secondaries	04	-	-	-	-	-	04
Total	50	17	21	06	00	02	04

Correlation of FNAC vis - a - vis HPE for Various Diseases

In our study, TB adenitis was diagnosed FNAC in 17 cases, out which 16 were correctly diagnosed, hence one case false positive and 3 cases were false negative. Chronic nonspecific adenitis was diagnosed by FNAC is 21 cases out of which 11 cases were correctly diagnosed, hence there were 10 cases of false positive and one case of false

negative. FNAC could diagnose 6 case of reactive hyperpiesia. Out of which only 2 cases were correctly diagnosed, hence there were 4cases of false positive and 6 cases of false negative, FNAC could not diagnose, any case of Hodgkin’s lymphoma. Non-Hodgkin’s lymphoma was diagnosed by FNAC in 2 cases, thus there were 3 cases of false negative. No false positive.

Table-5: Showing Accuracy of FNAC for Various Diseases in Percentage

Sl. No.	Diseases	HPE	FNAC	Accuracy (%)
1.	TB Lymphadenitis	19	16	84.2
2.	Chronic Non-Specific Lymphadenitis	12	11	91.6
3.	Reactive Hyperplasia	08	02	25
4.	Hodgkin’s Lymphoma	02	00	00
5.	Non-Hodgkin Lymphoma	05	02	40
6.	Secondary Lymphadenopathy	04	04	100
7.	Over all	50	35	70

Discussion

Fifty cases of cervical lymphadenopathy were studied in detail during the above-mentioned period prospectively in GGH/RIMS, Kadapa. Benign lymphadenopathy was commonest cause of cervical. it accounted for 78% of cases out of which TB adenitis was the commonest cause. Primary tumors of lymph nodes constituted 14% and secondaries for 8%.⁽⁵⁾ Cervical lymphadenopathy was more common in 2nd and 3rd decades accounting for 52% and least common in 7th and 8th decade accounting for 2%. Malignancy

was more common after 5th decade. Swelling is the common symptom for all patients. Fever was associated with 73.6% patients with TB lymphadenitis and cough is the less common symptom associated with only 10% patients. Loss of weight and appetite was associated with 75% patients of metastatic lymphadenopathy.⁽⁴⁾ It is found that 50% of total cases were provisionally diagnosed as TB lymphadenitis, out of which HPE proved only 32% cases.28% of total cases were diagnosed as chronic nonspecific lymphadenitis.

Table-6: Comparison of most Common Etiology of CCL with Other Studies

Study	Year	TbAdenitis (%)	CNSL (%)	Reactive Hyperplasia (%)	Hodgkin’s (%)	NHL (%)	Secondary’s (%)	Total
Narang D et al.,	1990	52	10	-	8	7	23	60
Malkar Detal.,	1991	39	15	-	15	-	31	61
Vernekar	1996	45	46.25	-	-	-	2.5	80
Present Study	2018	38	24	16	04	10	08	50

Comparing the age distribution of my study with other studies. According to Nanda et al study-16, tuberculosis adenitis occurred majority in 2nd and 3rddecade.⁽⁴⁾ According to Pamra S.P.P et al study in 1 majority of TB adenitis occurred in 2nd and 3rd decade, when majority of primary and secondary lymphadenopathy were common after 5th decade.⁽⁵⁾

Comparing the most common presenting symptoms, according to A. Singh and M. Singh et al., 1986 study Out of 10 cases studied, 35 cases had fever. Loss of weight and appetite were observed in 30 cases.⁽⁸⁾ According to Pandap et M.C, et al., 1987, 36 cases of TB adenitis, there was no evidence of active pulmonary Tb in any of the cases.

Table-7: Correlation between FNAC and Clinical Diagnosis

Diseases	Series					
	Tripathy et al., 1985		Narang, et al., 1990		Present Series-2018	
	P. D	F. D	P. D	F. D	P. D	F. D
TB adenitis	16	14	32	29	25	16
CNSL	05	04	04	02	14	0
Lymphomas	06	05	10	07	07	05
Secondary's	09	09	14	14	04	04
P.D = Provisional diagnosis, F.D =Final diagnosis						

Conclusion

Tuberculosis continues to be the commonest cause of cervical lymphadenopathy followed by chronic nonspecific lymphadenitis. The common age of presentation being in 2nd and 3rd decade.⁽¹⁾ Secondary's occur in elderly age group. Cervical lymphadenopathy secondary to tuberculosis is found to be more common in jugulodigastric group of lymph nodes differing with malignancy which can occur in any other group. Provisional diagnosis of tubercular adenitis was not closely associated with histopathological diagnosis. Clinical diagnosis of secondary's neck was closely associated with FNAC. FNAC is safe, quick and cost-effective procedure and has high patient acceptance.⁽³⁾ It is a good screening procedure for TB adenitis and secondary's neck.

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