

Clinicopathological Analysis of Cervical Lymphadenopathy

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1. Introduction

Enlargement of cervical lymph nodes is a common clinical condition encountered by the clinicians. As the enlargement of the lymph nodes more than 1cm indicates a clinical manifestation of regional or systemic disease and serves as an excellent clue to the underlying disease.

Persistent enlargement of the lymph node necessitates detailed investigations to reveal an underlying pathology. Although reasonably accurate diagnosis can be made clinically, histopathological examinations are mandatory to establish and confirm the diagnosis. These can be overcome by doing FNAC, as it is obtained easily and quickly which is simple and cheap and requires only a specialist input (cytologist).

The commonest causes for cervical lymphadenopathy are tuberculous lymphadenitis which is a common manifestation of extra pulmonary tuberculosis, secondaries in the cervical lymph nodes, lymphomas and nonspecific lymphadenitis.

The gold standard biopsy modality in the workup of a neck mass is fine needle aspiration (FNAC). This procedure should always be done before the consideration of any open procedures. FNA can be used for both cytology and culture.

Aims:

To study the etiological and clinicopathological findings in cervical lymphadenopathy.

Objectives:

- To study about various clinical presentations of cervical lymphadenopathy.
- To correlate the pathological findings with the clinical diagnosis.
- To study the role of FNAC by correlating with confirmed biopsy reports
- To study the management, outcome and clinical behavior of cervical lymphnodes on follow up

2. Methods

- This is a prospective analytical study
- The study includes 100 patients who were admitted during the period from October 2020 – July 2022.
- The present study was carried out in the Department of General Surgery, Kamineni Institute of Medical Sciences, Narketpally.

Inclusion Criteria:

- 1) Patients presenting with palpable cervical lymph node enlargement of >1cm Of >3 weeks duration
- 2) Patients more than 8 years of age
- 3) Patients of both genders

Exclusion Criteria:

- 1) Patients where FNAC and/or Biopsy of node could not be carried out.
- 2) Patients not willing to undergo any investigations are exclude

3. Results

Table 1: Histopathological diagnosis based on FNAC (n=100)

Histopathological Diagnosis	Number of cases	Percentage
Tuberculosis	53	53
Reactive lymphadenopathy	27	27
Secondaries	14	14
Hodgkin's lymphoma	1	1
Non - hodgkin's lymphoma	5	5

Amongst cervical lymphadenopathy cases, majority were tuberculosis, followed by reactive lymphadenopathy cases, and the least being lymphomas

Table 2: Distribution of cases according to presenting symptoms (n=100)

Symptoms	Number of cases
Neck Swelling	100
Pain	15
Fever	19
Cough	13

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Loss of Appetite	12
Loss of Weight	17
Difficulty in swallowing	2
Change in voice	1

All of the cervical lymphadenopathy cases presented with neck swelling. 2nd most common symptom was fever, followed by loss of weight.

Table 3: Sensitivity & Specificity of FNAC in diagnosing tuberculous cervical lymphadenitis (n=100)

FNAC	Number of cases
True positive	40
False positive	0
True negative	14
False negative	37
Total	100

Sensitivity= TP/TP+FN= 75.5%

Specificity= TN/TN+FP= 100%

Table 4: Sensitivity & Specificity of FNAC in diagnosing reactive lymphadenitis (n=100)

FNAC	Number of cases
True positive	27
False positive	5
True negative	0
False negative	68
Total	100

Sensitivity= 100%

Specificity= 93.1%

Table 5: Sensitivity & Specificity of FNAC in diagnosing secondaries in cervical lymph nodes (n=100)

FNAC	Number of cases
True positive	13
False positive	0
True negative	1
False negative	86
Total	100

Sensitivity= 92.8%

Specificity= 100%

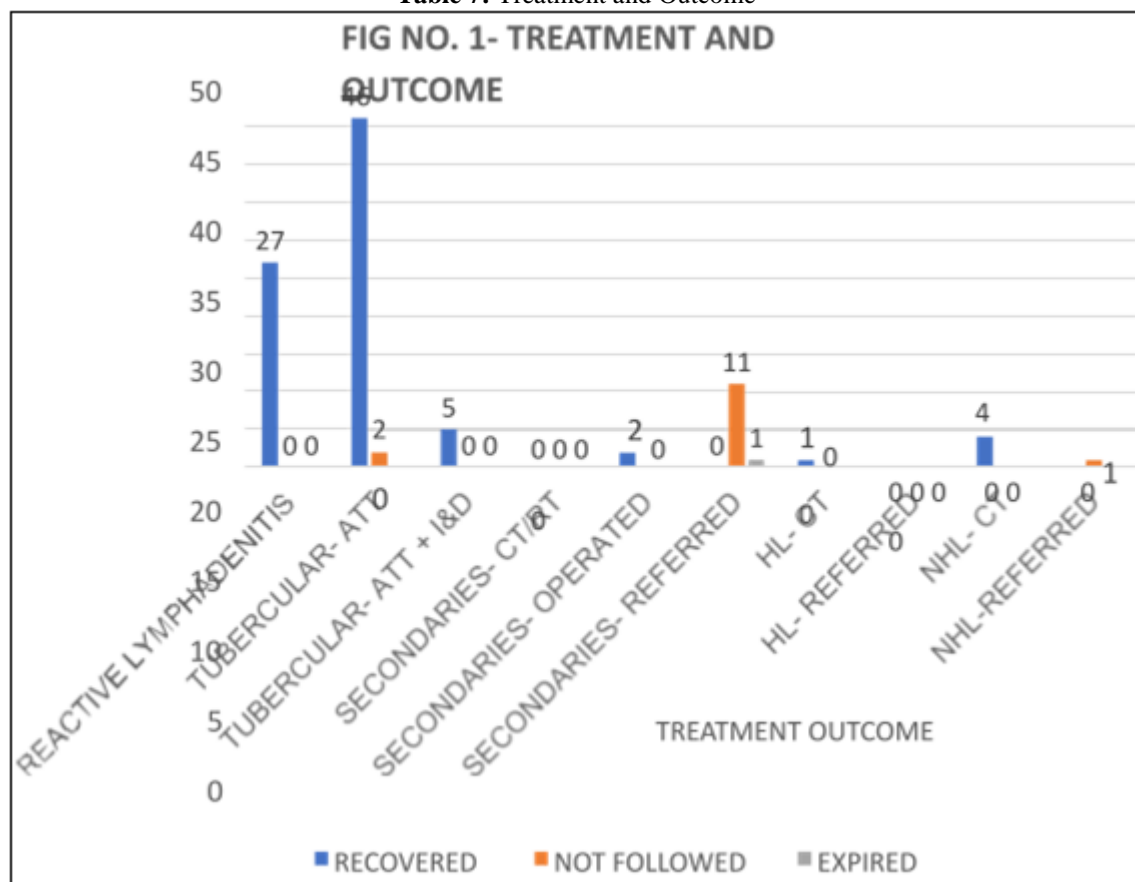
Table 6: Sensitivity & Specificity OF FNAC in diagnosing lymphoma in cervical lymph node (n=100)

FNAC	Number of cases
True positive	5
False positive	0
True negative	1
False negative	94
Total	100

Sensitivity= 83.3%

Specificity= 100%

Table 7: Treatment and Outcome



4. Discussion and Summary

Tuberculous cervical lymphadenopathy is the most common disease affecting the cervical lymph node - 53%, followed by reactive lymphadenitis - 27%, secondaries - 14%, and lymphomas - 6%.

In investigations, Fine Needle Aspiration Cytology was found to be accurate with 75.5% accuracy for the diagnosis of tuberculosis. Few patients were diagnosed as non-specific lymphadenopathy. They were later confirmed by biopsy to have either tuberculosis or reactive lymphadenitis.

Tuberculous lymphadenopathy cases were successfully treated with anti-tubercular drugs and by surgical procedure - Incision and Drainage, when required.

The cases of secondaries in lymph node, which were appeared as in papillary carcinoma were operated with good results. One case expired in the middle of investigations. The other cases were referred to higher oncology centres for treatment. All the referred cases could not be followed up.

Hodgkin's and Non-Hodgkin's lymphoma cases presented in the later stages. One case of Hodgkin's lymphoma, was treated with combination chemotherapy. Four among 5 cases of Non-Hodgkin's lymphomas was also treated with combination chemotherapy with good results and one case got referred to higher centre.

5. Conclusion

Cervical lymphadenopathy is a very common presentation of enlarged neck nodes in the general population

Most common histopathological types include:

- Tuberculous lymphadenitis
- Reactive lymphadenitis
- Malignant secondaries
- Lymphomas

In metastatic lymph node, method of diagnosis was Fine Needle Aspiration Cytology. Lymphomas were diagnosed by Fine Needle Aspiration Cytology and confirmed with excision biopsy

In the present study, Fine Needle Aspiration Cytology was found to be reliable and cheapest method of diagnosis without any significant morbidity and with good patient compliance.

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