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ENT

Co-Relation of Cyto-Histopathological Examination in Diagnosing Superficial Lymph Node Lesions of Neck

Lok Nayak[1*], Dr. Rajsekhar MD[2]
[1]Consultant surgeon, Department of ENT, Yeshoda Hospital, Somajiguda, Hyderabad, India
[2]Professor and HOD, Department of Pathology Varun, Arjun Medical College, Shahajanpur, Uttar Pradesh, India

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***Corresponding author**
Lok Nayak

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Abstract: Neck swellings are one of the commonest clinical presentations encountered by the practitioners. Due to their superficial nature diagnostic procedures can be easily performed sometimes appear without symptoms. If physical examination is failed FNAC confirms surgery 4But histopathological confirmation is mandatory in suspected, recurrent and euplastic lesions. Cytology &Histopathological Co-relation of Various Lymph Node Lesions the knowledge of the pattern of lymphadenopathy in a given geographical region is essential for making a confident diagnosis or suspecting a disease. The present study was carried out over a period of 1 year to find out the diagnostic accuracy of FNAC by comparative study with histopathological diagnosis and also compares its findings with various studies already published in the literature. Diagnosis in 40 cases with two false negative and one false positive result. Out of six reported malignant lesions by FNAC, 5 cases were found to be consistent with the histopathological examination. Hence, it becomes mandatory to perform histopathological examination of the lesions for confirmation.

Keywords: Histopathological Examination, Superficial Lymph Node, aspiration cytology (FNAC), Cytomorphological, neoplastic lesions, metastatic epithelial malignancy, Lymphadenopathy.

INTRODUCTION

Neck swellings are one of the commonest clinical presentations encountered by the practitioners. Diagnostic procedures can be easily performed on these swellings due to their superficial nature and provides ease both to the doctor and to the patients.

There often are no associated symptoms, other than the recognition of a "new lump" noted incidentally on palpation while grooming, or noticed by another individual. Evaluation of the neck mass must be approached in a thorough and disciplined manner [1]. Proximity of tissues of various types and wide range of primary and metastatic neoplasms are responsible for this site being the most common in FNAC diagnosis [2].

Fine-needle aspiration cytology (FNAC) can be performed in patients in whom the physical examination does not explain the neck masses. FNAC is being used as a first line of investigation in the diagnosis of neck swellings [3]. FNAC is applicable to easily palpable lesions of thyroid, breast, salivary glands, superficial lymph nodes, superficial growth of skin &soft tissue.2 FNAC differentiates non neoplastic lesions from neoplastic lesions thus eliminating need of surgical intervention in these lesions which can be treated conservatively [4]. But histopathological confirmation is mandatory in suspected, recurrent and neoplastic lesions. Hence, the objective of this study is to compare the findings of fine needle aspiration cytology and histopathology in diagnosing neck swellings associated with superficial lymph nodes.

MATERIALS AND METHODS

A retrospective study was conducted in Yeshoda Hospital from May 2016 to May 2017 and included 168 patients with Lymph node swellings. Outdoor as well as indoor patients with palpable neck swellings were referred to cytology department. Detail clinical history and significant findings were noted. After explanation of procedure and taking informed consent of patient, FNAC was done. Aspirations taken from various sites of lymph node, Cytomorphological diagnosis was given depending upon the pathology. Cyto-histopathological correlation was done in those cases.

Representative samples were taken from all the major adult age groups. The samples included patients between age group of 18-74 years. Out of total 168 patients with neck swellings, over a period of 1 year FNAC of lymph node lesions constituted 78 (32.14 %) of cases. The gender composition of total samples was 97 females and 71 males.

RESULTS

Maximum no. of patients were in the age group of 18-30 years (36%) followed by 31-40 years (23%) and least no. of patients were seen in age group of above 70 years. Out of 168 patients 97 (57.73%) were females and 71 (42.26%) were males.

In 78 (46.42%) cases of lymph node lesions, tubercular lymphadenitis (43.8%) was the predominant finding observed followed by reactive lymphadenitis in 26(33.33%) cases. Malignant lesions included 7 cases (7.69%) of metastatic epithelial malignancy and two cases (2.56%) of lymphoma. Histopathological examination done in 43 cases confirmed diagnosis in 40 cases with two false negative and one false positive result [Table-2].

Table-1: Cytology &Histopathological Co-relation of Various Lymph Node Lesions (N=78)

FNAC Diagnosis		No.of cases	%	HPE Done	Diagnosis Consistent with cytology	HPE Diagnosis Inconsistent with cytology	HPE Diagnosis
Reactive Lymphadenitis		26	33.35	2	1	1	RLH-1;GLN-1
Inflammatory	Non-Specific	10	12.82	4	4	-	Chronic Non-specific LN-4
	Tuberculosis	34	43.58	30	29	1	Granulomatous LN S/O Tuberculosis-29; KIKUCHI Disease-1
Malignant	lymphoma	2	2.56	2	1	1	NHL-1 RFH-1
	Metastasis	6	7.69	5	5	-	SCC-4 ;ADC-1
TOTAL		78	100				

RLH- Reactive lymphoid hyperplasia SCC-squamous cell carcinoma
LN-Lymphadenitis ADC- Adenocarcinoma
TB-Tuberculosis RFH-Reactive Follicular Hyperplasia

DISCUSSION

Lymphadenopathy is a symptom which frequently presents in primary care settings and affects patients of all ages [5]. Although the observation of lymph node enlargement sometimes raises fears about serious illness; it usually results from benign infectious causes. The fear arises due to the spectra of causes which include microbial, hematological, neoplastic, and connective tissue disorders [6].

The knowledge of the pattern of lymphadenopathy in a given geographical region is essential for making a confident diagnosis or suspecting a disease. Tuberculosis is the commonest cause of lymphadenopathy in developing countries like India and should be considered in every case of granulomatous lymphadenopathy.

In India, there is high prevalence of malignancies due to the rising use of various types of tobacco and its products. A very vast variety of lesions are commonly seen in head and neck including developmental, inflammatory, neoplastic and non-neoplastic lesions as well.

In 1930, Martin and Ellis described and first introduced the technique of FNAC for diagnosis of organ lesion [7]. The two fundamental requirements on which success of FNAC depends are representative sample and high quality of preparation [8].

The present study was carried out over a period of 1 year to find out the diagnostic accuracy of FNAC by comparative study with histopathological diagnosis and also compares its findings with various studiesalready published in the literature. Females were more than males. Maximum number of cases was in the age group of 18-31 years.

In our study, the commonest finding was tubercular lymphadenitis followed by reactive lymphadenitis and these findings are in concordance with the studies done by Kishore H *et al.* [9], Bhagat *et al*. [10], Sharma *et al*. [11] Ahmad T *et al*. [12] and El Haq *et al*.[13] in case of malignancies, metastasis was seen in 6 cases while lymphomas were seen in 2 cases. Among 5 cases, Suamous cell carcinoma was seen in $ cases and Adenocarcinoma was observed in 1 case after confirmatory histopathological examination. The reason for malignant lesions in lymph nodes can be attributed

to increased consumption of tobacco and tobacco related habits presently.

Histopathological examination done in 43 cases confirmed diagnosis in 40 cases with two false negative and one false positive result. Out of six reported malignant lesions by FNAC, 5 cases were found to be consistent with the histopathological examination.

The overall accuracy of FNAC was 93.02% in this study which is good but comparatively less than was observed by Kishore *et al*. [9] in 2015. The reason for this can be attributed to lesser sample size and involvement of less number of sites for examination.

It can be highlighted through this study that FNAC is a good diagnostic tool for diagnosing the lesions of lymph nodes but it can prove to be of limited use in case of borderline cases and grey. Zone cases. Hence, it becomes mandatory to perform histopathological examination of the lesions for confirmation.

CONCLUSIONS

FNAC is cheap and handy tool which can distinguish tubercular lymphadenitis from reactive and granulomatous lymphadenitis in majority of cases. However, a strong diagnostic accuracy can be obtained using histopathology.

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