



## Research Article

# Spectrum of Malignancy in Neck Lymphnodes

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### **Abstract**

**Aim and Objective:** To access the role of FNAC in diagnosing neck swellings.

**Material and Methods:** This retrospective study was done in a private lab from 1/1/2014 to 31/12/2015 in patients having swelling in head and neck region. Total 97 cases were evaluated in the cytopathology section and aspiration was done using 10ml syringe and 22-23 gauge needles.

**Results:** Cytodiagnostic yield was 90% while in only 10% cases, no diagnosis was given. Lymph node lesions were most common with metastatic squamous cell carcinomas and lipomas as common malignant lesion.

**Conclusion:** FNAC provides a reliable, cost effective, convenient, easily accessible and non-traumatic method as the best initial work up and management of swellings of sensitive head and neck region.

**Keywords:** Fine needle aspiration, Head and neck region.

### **Introduction**

FNA technique was first introduced by Martin & Ellis (1930) in diagnosis of various organs lesions.<sup>[1]</sup> Virtually any superficial organ or tissue can be sampled through this procedure. Easily targeted organs include lymph nodes. FNAC is now a procedure which is non-traumatic, easily accessible, inexpensive, excellent compliance and avoids the anaesthetic complications and requirement of open surgical biopsy.<sup>[2, 3]</sup>

### **Material and Methods**

The target population of this retrospective study was the patients that presented as neck masses . The aspiration was performed by using 10 ml

syringe and 22-23 gauge needle. After convincing the patient and taking written and informed consent for the procedure, detailed clinical history was taken and the area of interest was properly exposed. The mass was first cleaned using betadene and spirit, fixed between index finger and thumb and then needle was introduced. To and fro motion was performed along with continuous negative pressure. After that the pressure was released and needle was withdrawn. In cases of failed process and residual tumours, repeat aspirations were performed. For cystic lesions, cyst content was aspirated and smears were prepared after cytocentrifugation. Air dried smears were stained with Giemsa stain and smears

fixed in 95% alcohol were stained with Papanicolaou and haematoxylin and eosin.

### Results

Out of total 97, 90 cases were that of metastatic squamous cell carcinomas, 5 cases were poorly differentiated carcinomas, 1 case was that of NHL and 1 was malignant round cell tumour. Results are depicted in following table (table I).

**Table 1** Spectrum of lesions in lymph node

SN	Malignancy	No
1	Metastatic SCC	90
2	Poorly Diff ca	5
3	NHL	1
4	Round cell tumour	1

### Discussion

The procedure also provides the information about the next best step in clinical workup of patients. This procedure can easily distinguish between non-neoplastic and neoplastic conditions and can diagnose conditions like tuberculosis and reactive lymph node from malignant and metastasis thus preventing unnecessary surgery.<sup>[3, 4]</sup> Also, this is a procedure can be performed at peripheral health care center where facilities for histopathology is not available. The reliability of the method has been shown in several studies for neck masses.<sup>[5, 6, 7, 8, 9, 10]</sup>

The FNAC as an effective tool in the diagnostic Work up of lymphnodes. Various factors affect the accuracy of cytological diagnosis including the experience of aspirator, sampling method, the adequacy of sample the target organ and the expertise of examiner (Cytotechnologist and cytopathologist). The false positive diagnosis is rarely made by experienced and well trained individuals.

The cyto-diagnostic yield was 90% and in 10% of cases no diagnosis could be made because the material was unsatisfactory. Such high diagnostic yield was found in other studies also.<sup>[11,12]</sup> The normal range for non-diagnostic smears in lymphoid lesions is less than 10-15%.<sup>[13]</sup>

Out of total 97, 90 cases were that of metastatic squamous cell carcinomas, 5 cases were poorly

differentiated carcinomas, 1 case was that of NHL and 1 was malignant round cell tumour. Squamous cell carcinomas were most common metastatic lymph node lesions.

### Conclusion

In spite of the limitations and pitfalls, FNAC provides a reliable, cost effective, convenient, easily accessible, non-traumatic and highly accurate method as the best initial work up and management of swellings of head and neck region. Although, the benign results should be interpreted in the context of clinical, radiological and other data but if clinical malignancy is highly suspected, further evaluation in the form of excisional biopsies is justified.

### Limitations and Pitfalls

False positive cases may be due to regenerative changes, metaplasia and various other factors while false negative cases may be due to wrong technique, cystic areas, haemorrhage, and necrosis containing no viable diagnostic cells, small foci of neoplastic lesion nearby large reactive non-neoplastic mass and fibrotic lesions.

**Conflict of interest:** None

**Source of support:** None

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