



## Fine Needle Aspiration Cytology – Utilitarian tool for Cervical Metastatic Lymphadenopathy

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### Abstract

*Lymphadenopathy of neck region are the most frequently encountered complaints in patients referred for fine needle aspiration cytology. Fine needle aspiration cytology is a simple and effective tool for the assessment and diagnosis of cervical metastatic lymph node enlargement. In our study, conducted over a period of 4 months, we included 30 patients with metastatic deposits from various primaries, amongst which Squamous cell carcinoma was the most frequently encountered metastasis. FNAC may be recommended as a first line investigation for the evaluation of cervical neck node enlargement.*

**Keywords:** FNAC, Metastatic nodes.

### Introduction

Lymphadenopathy of neck region is most frequently encountered in patients referred for fine needle aspiration cytology.<sup>7</sup> Numerous causes and easy accessibility of cervical nodes make FNAC as the primary workup. FNAC combined with clinical correlation can be used as first line investigation in the workup of lymph node lesions as it is simple and cost effective procedure.<sup>1,9</sup> It is the only tool for the diagnosis and further management of the patients in some cases of metastatic malignancies.<sup>2</sup>

### Aim

To study the utility of FNAC in the detection of cervical lymph node metastasis.

### Materials and Methods

The study was conducted in the cytology section of Department of Pathology MMC&RI. FNAC was performed on patients using 23G needle attached to 5cc syringe. Smears were fixed and stained with Papanicolaou as well as Hematoxylin & Eosin. Lymph node aspirates found positive for metastatic deposits were included in our study. Other lymph node aspirates with inflammatory etiologies were excluded.

### Results

Out of 30 patients studied, majority of the patients were above 45 years. There were 26 males and 4 females in our study and the Male to female ratio in this study was 6.5:1. The lymph nodes

involved by malignancy were 1.5 cm or more in size. Amongst the cervical lymph nodes level II were involved most frequently (40%). Metastasis to lymph nodes was clinically unsuspected in 33% of the cases. Squamous cell carcinoma was the most common tumor to metastatize to cervical lymph node with the primary most commonly from oropharynx.

**Table 1**

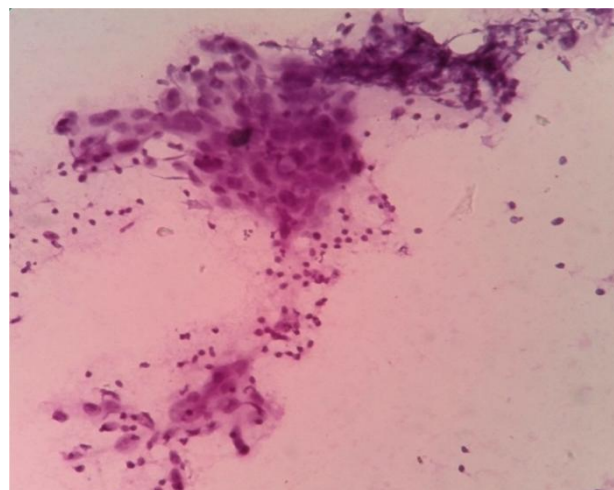
Frequencies of metastasis of various carcinomas	
Squamous cell carcinoma	46.6%
Adenocarcinoma	3.3%
Suspicious of metastatic deposits	16.6%
Others	33.3%

**Table 2**

Topographic distribution of lymph nodes aspirated	Frequency
Level 1	30%
Level 2	40%
Level 3	6.6%
Level 4	0%
Level 5a	10%
Level 5b	13.4%

**Table 3**

Site of tumour origin	Number of cases
Oral cavity, oropharynx and larynx	12
Lungs	2
GIT	3
Thyroid	1
Breast	1
Unknown	11



**Fig.2:** Photomicrograph of smear showing metastatic deposits from primary Squamous cell Carcinoma of Pyriform fossa (Hematoxylin and eosin stain,40 X)

**Discussion**

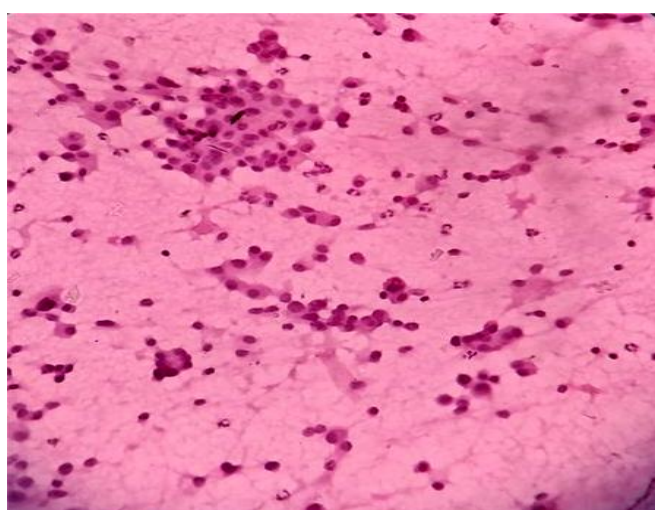
Metastatic malignancy is a more common etiology of peripheral lymphadenopathy, especially in patients over 40 years of age, the cervical group being most common to be involved.<sup>5,6,7</sup> The diagnostic accuracy of FNAC in metastatic disease varies from 87%-97.9%.<sup>3</sup>

On review of literature, very few studies were done on utility of FNAC on metastatic malignant cervical lymphadenopathy.

In our study squamous cell carcinoma was the most common cytomorphological type (46.6%) similar to other Indian studies.<sup>1,3,8,12</sup> The primary was most often from oral cavity, pharynx and larynx(36.6%)(Table 1 and 3). These findings were similar to the study conducted by Shamim et al (27.7%).<sup>2</sup> Cervical lymph nodes particularly upper cervical and posterior cervical nodes drain head and neck and may bear metastatic carcinoma originating in nasopharynx, tonsillar fossa, tongue, thyroid etc.<sup>1</sup> In our study level II cervical nodes were most commonly involved as compared to level V cervical nodes involved in the study conducted by Pravin et al (Table 2).<sup>4</sup>

**Conclusion**

FNAC not only confirms the presence of metastatic disease but also helps in detecting origin of primary tumor, especially in cases of



**Fig 1:** Photomicrograph of smear showing metastatic deposits from Medullary carcinoma of thyroid (Hematoxylin and eosin stain, 40X)

occult carcinoma. Ancillary techniques can further support the diagnosis. Fnac is useful also as a prognostic tool in metastasis to regional lymph nodes.

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