

Role of FNAC in evaluation of metastatic cervical lymph nodes - A hospital-based study

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Abstract

Background: fine needle aspiration cytology (FNAC) is a simple, reliable and an inexpensive diagnostic method. Cervical lymph nodes are a common site of metastasis of different cancers and in such cases FNAC helps to diagnose metastasis and also give a clue about origin of primary tumor.

Methodology: Patients referred for undergoing FNAC having suspected neck nodes were studied and relevant clinical data was collected.

Duration of study was from January 2021 to November 2021. 50 cases of clinically diagnosed metastatic carcinoma were selected.

Results: 50% diagnosis was metastatic squamous cell carcinoma. 85% of cases seen in males, in age group above 50 years. 28% cases had primary site in oral cavity.

Conclusion: FNAC is useful to diagnose metastasis in neck lymph nodes.

Keywords: FNAC, Lymph node, Metastasis, Squamous cell carcinoma

Introduction

- Fine needle aspiration cytology is a reliable, safe, rapid and inexpensive method.
- FNAC not only confirms the presence of metastatic disease, but also gives the clue regarding the nature and origin of primary malignancy, prognosis as well as in the management for staging purposes.
- Cervical lymph node metastasis is the common site of different cancers.

Materials and methods

Study design

- The present study was a retrospective study undertaken at Mahatma Gandhi Medical College and hospital, tertiary care centre, Jaipur, India, over a period of eleven months January 2021 to November 2021.

Sample size

Total 50 cases of clinically diagnosed metastatic carcinoma were selected.

Study participants

• Inclusion criteria – Patients referred for undergoing FNAC having suspected neck nodes were studied and relevant clinical data was collected.

Sample collection

FNAC done from suspected node site and slides prepared for examination. Slides were air dried and then stained. Stain used- H&E stain and May Grunwald Giemsa stain.

Results

- Out of 50 cases studied, maximum cases in this study were in age group above 50 years i.e 34 cases (68%) and 38 cases(76%) seen in males.
- Out of 50 cases 32 cases of known primary site and 18 cases of unknown primary site.
- Out of 32 cases of known primary site, 17 cases (53.1%) has oral cavity as primary site.
- Results obtained were tabulated and compared with previous study results

Discussion

In the present study total 50 cases were studied. Majority of cases were in the age group above 50 years. With contrast of study by Mehrotra et al and Virendra et al in which commonly affected age group is 50-60 yrs while in Ghartimagar et al study commonly affected age group is above 60 yrs.

In present study male female ratio is 3.16:1 while in study by Virendra et al there is male female ratio was 4:1 and in study by Bhattacharjee et al male female ratio was 2.9:1.

In present study the most common site of metastasis is oral cavity which is similar to study by Izhar N. Bhagwan and Karabi Kohar et al while in study by Malika Afroz there was most common site was larynx.

In present study there is most common cytological diagnosis is squamous cell carcinoma on cytological evaluation similar to study conducted by Izhar N. Bhagwan and Kiran Alam et al.

Conclusion

- FNAC is a rapid, safe and cost-effective technique. It gives early and accurate results with minimal invasion and reduces the need for surgical biopsies. Thus, saves cost and time to reach to final diagnosis.
- It is therefore concluded that FNAC is a useful tool in diagnosis of metastatic lymphadenopathy with good certainty.

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Legend Figures and Tables

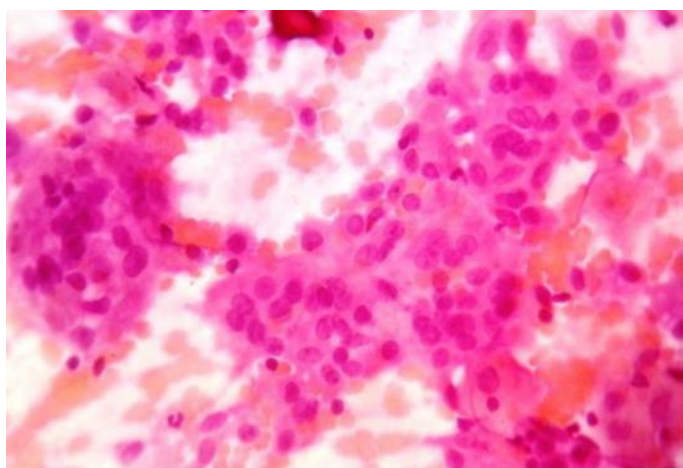


Fig 1: Squamous cell carcinoma

Sheets or singly placed cells with increased N:C ratio, central nuclei, nuclear hyperchromatism and pleomorphism. Keratin may be seen.

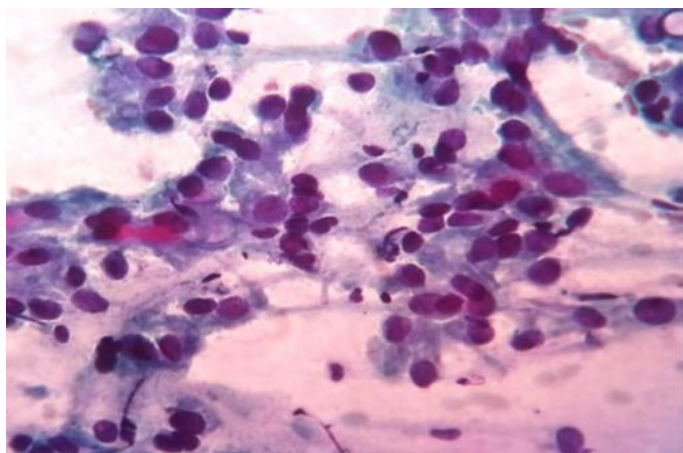


Fig 2: Metastatic Adenocarcinoma

Cohesive groups of polygonal to columnar cells with abundant cytoplasm, hyperchromatic nuclei and prominent nucleoli.

Table 1: Distribution of 32 cases on basis of known primary sites

Sn.	Primary site	No. of cases	Percentage
1	Oral cavity	17	53.1%
2	Larynx	6	18.75%
3	Nasopharynx	4	12.50%
4	Lung	2	6.25%
5	Breast	2	6.25%
6	Abdomen	1	3.10%
	Total	32	100%

Conclusion- Maximum cases (17) had primary site in oral cavity i.e., 53.1% of the 32 cases with known primary site.

Table 2: Cytological diagnosis of metastatic cervical node

Sn.	Diagnosis	No. of cases
1	Squamous cell carcinoma	36
2	Adenocarcinoma	08
3	Nasopharyngeal carcinoma	04
4	Poorly differentiated carcinoma	02
	Total	50

Most common type of metastasis was squamous cell carcinoma.

Table 3: Cytological diagnosis with known primary site

Sn.	Primary Site	Cytological Diagnosis	No. of cases
1	Oral cavity	Squamous cell carcinoma	17
2	Larynx	Squamous cell carcinoma	6
3	Nasopharynx	Metastatic	4

		nasopharyngeal ca	
4	Lung	Squamous cell carcinoma	1
5	Lung	Metastatic Adenocarcinoma	1
6	Breast	Metastatic Adenocarcinoma	2
7	Abdomen	Metastatic Adenocarcinoma	1
	Total		32

Table 4: Cytological diagnosis with unknown primary

Sn.	Cytological Diagnosis	No. Of cases
1	Met. Squamous cell carcinoma	12
2	Met. Adenocarcinoma	4
3	Poorly differentiated carcinoma	2
	Total	18