

Original article**“Role of FNAC in the diagnosis of cervical (NECK) swellings”****Jha R K¹**

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Abstract

Background: Fnac is simple, quick and inexpensive method of diagnosis of superficial swellings of the body. A test performed for to avoid unwanted surgery with minimal trauma with complication and results can be rapidly available **Methods:** A retrospective study carried out at pathology department of Janki Medical College, Ramdaiya, Janakpur ,Nepal. A total of 800 FNAC were done, out of which 200 FNAC were on swelling of neck region. FNAC procedure were a done after a through physical examination. **Result:** Out of 200 cases 39% of aspirates were from cervical lymph node followed by salivary gland (37%), thyroid gland (20%) and undetermined origin with 8 cases (4%). The commonest diagnosis was reactive lymphadenitis (23%) followed by thyroid benign lesions (19%) mostly goitre. **Conclusion:** FNAC is an appropriate first line investigation of neck swellings.

Key words: Diagnosis, FNAC.

Introduction

FNAC is simple, quick and inexpensive method of diagnosis of superficial swellings of the body.^[1] In neck there are different kinds of swelling that varies from inflammatory to neoplastic lesion. Most common inflammatory lesions are reactive lymphadenitis, tuberculous lymphadenitis and sialadenitis etc. Neoplastic lesions are metastatic carcinoma of lymph node, thyroid cancer and pleomorphic adenoma etc. FNAC gives the ideas of cells of lesion from the aspirated material. A test performed for to avoid unwanted surgery with minimal trauma with complications and results can be rapidly available

Material and Methods

This is retrospective study carried out at pathology department of Janki Medical

College, Ramdaiya, Janakpur ,Nepal from August 2009 to December 2011. During this period a total of 800 FNAC were done, out of which 200 FNAC were on swelling of neck region. FNAC procedure were a done after a through physical examination. Palpable neck swelling were aspirated using 23 gauze needle and 20 ml syringe. A negative pressure was applied to syringe by pulling the plunger and at least 2 dry specimens and alcohol fixed specimen were taken. The alcohol fixed smears were immediately submerged in 95% ethyl alcohol. All the slides were prepared and stained by the staff of pathology department of Janki Medical College. The data were divided into 4 large group, which represent the nature of origin of neck masses.

The groups are a) cervical lymph node b) salivary gland c) thyroid gland d)

undetermined origin. The results of FNAC were evaluated as 1) inflammatory lesion 2) benign lesion 3) malignant lesion. Excisional biopsy examination was excluded in this study.

Results

A total of 200 cases were included in this study. The age of the patient ranges from 2 years to 74 year. There were 108 male and 92 female patient, most of the patient were Hindu followed by Muslims 70. Majority of aspirates were from cervical lymph node which consist of 78 cases (39%) followed by salivary gland 74 cases (37%), thyroid gland 40 cases (20%) and undetermined origin with 8 cases (4%).

Reactive lymphadenitis was the commonest diagnosis 23% followed by thyroid benign lesions (19%) mostly goitre. Others lesion include salivary glands benign lesion, mostly pleomorphic adenoma, tuberculous lymphadenitis (12 %), sialadenitis 10%. Metastatic carcinoma to lymph node was the most common cases of malignancy.(Table 1)

Table-1: Results of fnac neck swelling showing various pathological conditions (N=200)

Type of lesion	Number	Percentage (%)
Lymphadenitis	70	35%
• Reactive	46	23%
• Tuberculosis	24	12%
Sialadenitis	2	10%
Benign Lesion	36	18%
• Salivary Gland		
• Pleomorphic Adenoma		

<ul style="list-style-type: none"> • Benign Mass Others Cystic Lesion	18	9%
Malignant Lesion <ul style="list-style-type: none"> • Lymph Node • Thyroid Carcinoma Others Carcinoma Of Unknown Origin	10	5%
	8	4%
	2	1%
Thyroid Benign Lesion	38	19%
• Goitre	32	
• Thyroglossal Cyst	6	

Discussion

In the present study inflammatory lesion which consist of lymphadenitis and sialadenitis were 45%, followed by benign lesion of thyroid (19%), salivary gland benign lesion 18% and malignant neoplasm accounted for 9%. Lymphadenitis and tuberculous lymphadenitis found most commonly in younger age group and malignant lesion is in older age group. Tuberculous lesion was more common in female group than the male.

Salivary gland swellings were mostly in the parotid or submandibular glands usually presents as an upper neck mass and thyroid neck swelling presented as front of neck, mostly in female between 27 year to 52 years of age. El hag et al showed that reactive lymphadenitis was the most common (33%) cause of neck swelling.^[2]

Similarly, a study in India found that 84.5% cases to be benign lesion and 15.5% cases of malignant lesion in the evaluation of asymptomatic cervical lymphadenopathy.^[3]

In contrast, In developed nation the spectrum of finding is different. A study from the New Zealand (n=187) showed that malignancy accounted for 50% of cases.^[4] Similarly, another study from west reported 59% to be malignant lesions and 34% to be benign lesions.^[5]

This shows epidemiological variation between the developed and developing countries. Infection like tuberculosis are common in developing countries while malignancies are more common in developed countries. Nepal is developing countries and the spectrum shows a similar pattern to other developing countries were cervical lymphadenitis is more common causes of neck masses.

The main limitation of the study was the newly established department enhanced the finding may not be comparable to the established centers. However, despite this it can be considered acceptable.

Conclusion

In conclusion this study showed that FNAC is an appropriate first line investigation of neck swellings. It is an economical, fast, safe and minimally invasive

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