



EVALUATING THE UTILITY OF FINE-NEEDLE ASPIRATION CYTOLOGY(FNAC) IN LYMPH NODE PATHOLOGIES- A FOLLOW-UP STUDY

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ABSTRACT

Background: Lymphadenopathy or adenopathy is an often encountered clinical problem with many causes ranging from inflammatory to malignant process. The present study was conducted to assess the cases of lymphadenopathy using FNAC.

Materials & Methods: This study comprised of 140 patients of male and female with neck masses. All patients underwent to FNA and subsequently surgical excision of their neck masses. Smears were then prepared and marked with Pap method.

Results: Out of 140 cases, males were 80 and females were 60. The difference was non- remarkable (P- 0.1). Out of 140 cases, 105 were benign and 35 were malignant. In begin lesions, 70 were in males and 40 were in females and in malignant cases, 15 were in males and 15 were in females. The difference was significant (P- 0.01). Metastatic neoplasm was seen in 11 males and 9 females, hodgkin's lymphoma in 5 males and 4 females, and non- hodgkin's lymphoma in 4 males and 2 females. The difference was nonsignificant (P> 0.05).

Conclusion: FNAC is the simple, safe, reliable, and cost-effective procedure for initial screening of various lymph node pathologies.

KEYWORDS : Hodgkin's lymphoma, lymphadenopathy, Biopsy

INTRODUCTION:

Lymphadenopathy is a condition in which lymph nodes are abnormal in size, number. It may be classified by size, where lymphadenopathy in adults is frequently defined as a teeny axis of one or more lymph nodes is bigger than 10 mm. Localized lymphadenopathy can be localized due to localized spot of infection as like an infected spot on the scalp will cause lymph nodes in the neck on the same side.^[1] until 1921, The test of FNA developed slowly, when Guthrietried to correspond FNA results with many disease processes^[2] Easy to getting a sample for cytological or histological examination has made it an important component of practices of the pathologists. Fine needle aspiration cytology (FNAC) has been introduced in laboratory diagnostics for the last two or three decades. So case of lymphadenopathy, FNAC becomes mandatory in order to reach out the exact cause. Most of the diagnoses are reactive or non-specific inflammatory conditions, however a significant number of cases are composed of granulomatous inflammations, the most common cause is tuberculosis. Fine needle aspiration cytology (FNAC) is a part of the initial management of patients presenting with neck masses using an 18 to 23 gauge needle.^[3] This study was conducted to assess the cases of lymphadenopathy using FNAC.

MATERIALS & METHODS

This study was conducted in the department of pathology. It comprised of 140 patients of both genders, male and female, with neck masses who visited the department. All were informed regarding this study. All patients underwent both FNAC and subsequently surgical excision of their neck masses. Smears were then produced and marked with Pap method. Smears were studied with microscope by one pathologist to access the diagnosis. This case was divided into benign and malignant. Nondiagnostic smears were discarded. So result obtained was subjected to statistical analysis using chi-square test. P-value less than 0.07 was considered remarkable.

RESULTS AND DISCUSSION:

out of 140 cases, males were 80 and females were 60. The difference was non- remarkable (P- 0.1). Figure-1. FNAC results according to nature of lesion out of 140 cases, 105 were benign, and 35 were malignant. In beginning lesions, 70 were in males, and 40 were in females, and in malignant cases, 15 were in males and 15 were in females. The difference was

remarkable (P- 0.01). Figure-2

Lymph node enlargement is recognized as a common sign of infectious or malignant disease. In case of acute infection, It can be reactive such as bacterial & viral.

Fine-needle aspiration (FNA) is a diagnostic procedure used to look over lumps or masses. In this technique, a thin, hollow needle is inserted into the mass to take samples of cells that are examined under a microscope after being stained. The biopsy and sampling read together are called fine-needle aspiration cytology (FNAC). Fine-needle aspiration biopsies are very safe and minor surgical procedures.^[4] In a study by Abudul et al, of the 289 lymph node biopsy specimens received, 154 were from males and 135 from females giving a male: female ratio of 1.14:1. Age ranged of the patients was 27 to 90 years, with a mean age 33.9 years.^[5] The most expected lymph node group affected was the cervical (30.4%) followed by axillary (9.7%) and inguinal (8.7%). Malignant lymphoma Hodgkin's disease (HD), 57 non Hodgkin's lymphoma (NHL)] 128 (44.3%), reactive hyperplasia 68 (23.5%), and tuberculosis 41 (14.2%) were the common causes of lymph node enlargement. While HD, reactive hyperplasia and tuberculosis were commonest in young adult patients and NHL was the predominant cause of lymph node enlargement above 50 years.

A needle aspiration biopsy is safer and less traumatic than an open surgical biopsy, and significant complications are usually rare, depending on the body site. Common complications include bruising and soreness. There is a risk, because the biopsy is tiny, that the problematic cells will be missed, resulting in a false-negative result. There is a risk that the cells taken will not enable a definitive diagnosis. The most common symptom of Hodgkin's is the painless enlargement of one or more lymph nodes. The nodes of the neck and shoulders are most frequently involved. The lymph nodes of the chest are often affected, and these may be noticed on a radiograph. Classically, involved nodes are painful after alcohol consumption, though this phenomenon is very uncommon, occurring in only two to three percent of people with Hodgkin's lymphoma. The signs and symptoms of non-Hodgkin's lymphoma vary depending upon its location within the body. Symptoms may include bone pain, chest pain, or itchiness, and lymphadenopathy. Some forms are slow

growing while others are fast-growing. Enlarged lymph nodes may cause lumps to be felt under the skin when they are close to the body's surface. Lymphomas in the skin may also result in lumps, which are commonly itchy, red, or purple.

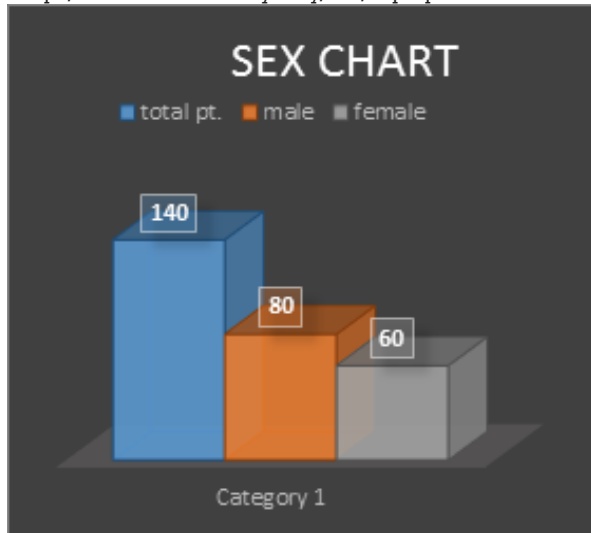


Figure-1

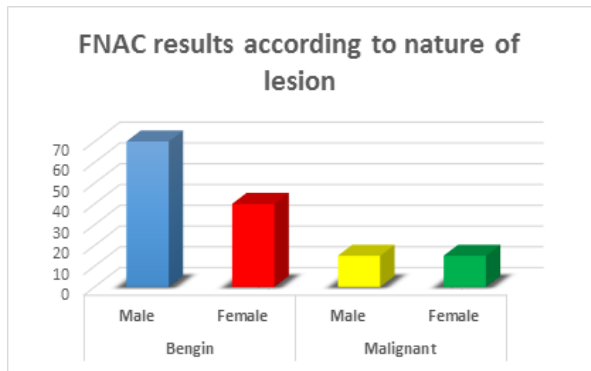


Figure-2

CONCLUSION:

Lymph node biopsy plays a great role in establishing the cause of lymphadenopathy. The most common cause was benign lesions.

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