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A study of FNAC in Lymphadenitis - A cross sectional study conducted in a tertiary Hospital

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Abstract
Enlarged lymph nodes are easily accessible for aspiration, fine needle aspiration (FNAC) is advocated for the initial diagnosis and management of patients with lymphadenopathy. The technique being simple and leads to minimizing complications. It has been found that it offers a nearly accurate diagnosis of various pathologies including reactive lymphadenitis/inflammatory conditions, granulomatous disorders and neoplastic disorders. This study puts in an effort to study the FNAC findings in lymphadenitis which are dealt commonly in this population.

Keywords: FNAC, Lymphadenitis, Tertiary Hospital, Cross-Sectional

Introduction
Lymph nodes are often involved in infectious diseases, many neoplastic conditions, lipid Storage diseases, endocrine disorders and various other conditions such as Sarcoidosis and Histiocytosis [1]. Surgical biopsy is considered to be the gold standard for diagnosis. However, it is costly, time-consuming and associated with more complications. Because, enlarged lymph nodes are easily accessible for aspiration, fine needle aspiration (FNAC) is advocated for the initial diagnosis and management of patients with lymphadenopathy [2]. The technique being simple and leads to minimizing complications. It has been found that it offers a nearly accurate diagnosis of various pathologies including reactive lymphadenitis/ inflammatory conditions, granulomatous disorders and neoplastic disorders. It identifies cases which need further investigations or follow-up. Hence, an excisional biopsy can be avoided in most of the cases [3]. De May has described the advantages of FNAC with the acronym SAFE. It means Simple, Accurate, Fast and Economical [4]. FNAC has a pivotal role in the evaluation of peripheral lymphadenopathy and can be used as an alternative to excision biopsy in developing countries with limited financial and health care resources [5]. Various researchers have described the pattern of diseases diagnosed on the basis of FNAC of peripheral lymph nodes in different parts of the country [6-13]. This study puts in an effort to study the FNAC findings in lymphadenitis which are dealt commonly in this population.

Aims and objectives
To study the common FNAC findings of the lymphadenitis in this population.

Materials and methods
This study was done in the Department of Pathology, JNUIMSRC, Jaipur.
This study was conducted from May 1st 2021 to August end 2021.
All slides and reports which were collected from the Department of Pathology and MRD were collected and reported.
The total sample size was thus 171.
The design of the study was retrospective cross sectional.

Exclusion criteria
- Uncertain slides.
- Sample inadequate slides.

Results

Table 1: Site of lymphadenopathy

Cervical	121
Axillary	34
Inguinal	11
Generalised	05

Table 2: Cytological study

Acute lymphadenitis	29
Chronic reactive hyperplasia	40
Lymphoma	02
Tuberculous lymphadenitis	81
Metastic	19

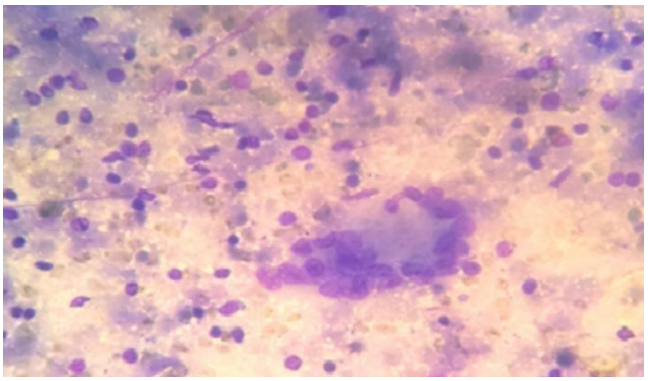

Image 1: Tuberculous lymphadenopathy

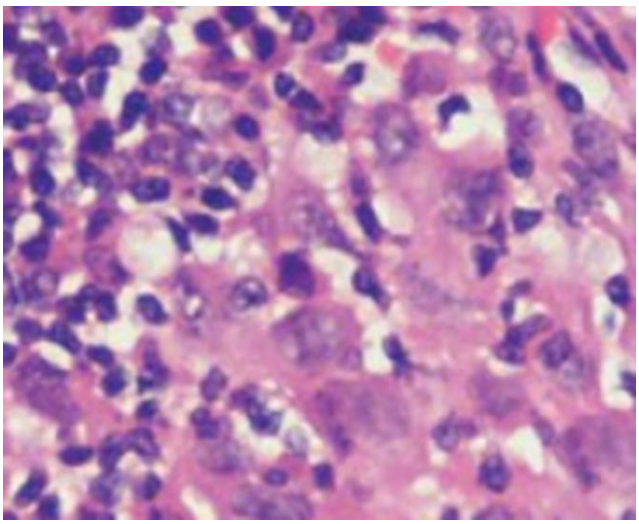

Image 2: Metastatic Lymphadenopathy

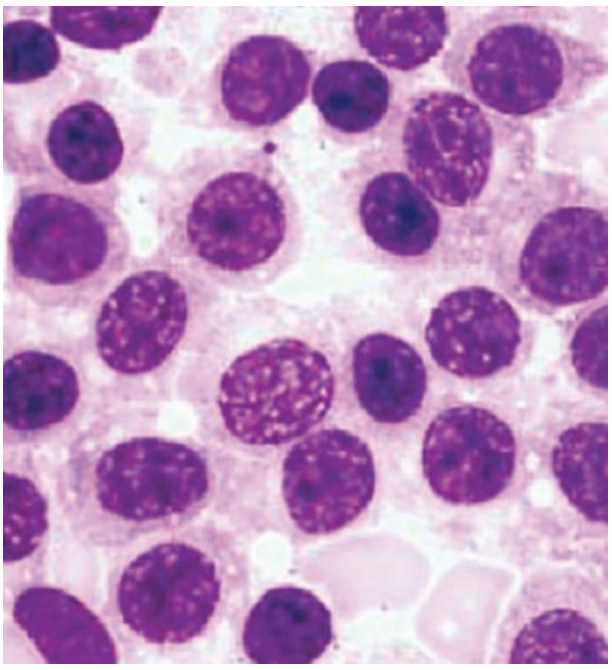

Image 3: Lymphoma

Discussion

Fine-needle aspiration (FNA) is a diagnostic procedure used to investigate lumps or masses. In this technique, a thin (23–25 gauge (0.52 to 0.64 mm outer diameter)), hollow needle is inserted into the mass for sampling of cells that, after being stained, are examined under a microscope (biopsy). The sampling and biopsy considered together are called fine-needle aspiration biopsy (FNAB) or fine-needle aspiration cytology (FNAC) (the latter to emphasize that any aspiration biopsy involves cytopathology, not histopathology). Fine-needle aspiration biopsies are very safe minor surgical procedures. Often, a major surgical (excisional or open) biopsy can be avoided by performing a needle aspiration biopsy instead, eliminating the need for hospitalization. In 1981, the first fine-needle aspiration biopsy in the United States was done at Maimonides Medical Center.

Lymphadenopathy is one of the common conditions encountered in outpatients. It is a clinical manifestation of regional or systemic diseases and gives a clue to the underlying disease. It can be due to benign or malignant causes. The etiology varies according to the geographical condition. It becomes important to identify the underlying cause for proper diagnosis and adequate management. Excision biopsy is a gold standard diagnostic test but is associated with complications. FNAC has been established as a safe, cheap and reliable test for diagnosis of superficial masses. It is used as the first-line investigation in the initial management of lymphadenopathy cases and has been advocated as a useful method in comparison with more expensive surgical excision biopsies, especially in developing countries with limited resources. Awareness about the prevailing pattern of causes of lymphadenopathy in a particular area makes the task of clinician easier. Hence, the present study was conducted to assess the Cytomorphological. Pattern of lymph node swellings by FNAC in patients presenting with peripheral lymph node swellings. Cytomorphological features were used for diagnosis of pathology as discussed by Shah *et al.* [14].

Conclusion

The most common findings encountered have been

discussed and have been reported. This study is intended to help the practising pathologists of this region.

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