



Original Research Article

PATTERN OF LYMPH NODE LESIONS CLASSIFIED BY THE SYDNEY SYSTEM: A TERTIARY CARE CENTER EXPERIENCE IN SOUTHERN TELANGANA

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Received : 28/01/2026
Received in revised form : 14/03/2026
Accepted : 02/04/2026

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DOI: 10.70034/ijmedph.2026.2.92

Source of Support: Nil,
Conflict of Interest: None declared

Int J Med Pub Health
2026; 16 (2); 548-550

ABSTRACT

Background: Fine needle aspiration cytology (FNAC) is a rapid, minimally invasive and cost effective diagnostic modality for the evaluation of lymphadenopathy. Historically, the absence of a standardized reporting system resulted in variability in interpretation and communication. The Sydney Reporting System was introduced at the 20th International Congress of Cytology held in Sydney in 2019 to provide a uniform framework for lymph node FNAC reporting.

Materials and Methods: This Prospective study was conducted in the Department of Pathology, Government Medical College, Wanaparthy, from 2023 to 2025. All lymph node FNAC cases received during the study period were reviewed and categorized according to the Sydney Reporting System. Demographic details, lymph node site, and cytological diagnosis were analyzed.

Results: A total number of 90 lymph node FNAC cases were evaluated. Benign lesions constituted the majority, with reactive lymphadenitis being the most common diagnosis, followed by granulomatous and suppurative lymphadenitis. Malignant lesions formed a smaller proportion of cases. Cervical lymph nodes were the most frequently involved site.

Conclusion: The Sydney Reporting System is a practical and reproducible framework for standardized lymph node FNAC reporting. Its application improves diagnostic clarity and facilitates effective clinician–pathologist communication, even in FNAC only settings.

Keywords: FNAC, Lymph node, Sydney system, Cytology.

INTRODUCTION

Fine needle aspiration cytology (FNAC) is widely used for the initial evaluation of lymphadenopathy due to its simplicity, minimal invasiveness, and rapid turnaround time. Despite its advantages, non uniform terminology and inter observer variability historically limited its clinical reliability. To address these limitations, a categorical system for performance, classification and reporting of lymph node cytopathology, known as the Sydney Reporting System, was proposed at the 20th International Congress of Cytology held in Sydney in 2019¹. The Sydney system provides standardized diagnostic categories, enabling improved communication between cytopathologists and clinicians and aiding in

appropriate patient management². The present study was undertaken to apply the Sydney Reporting System to lymph node FNAC cases from a tertiary care center in southern Telangana and to document the spectrum of lymph node lesions encountered.

MATERIALS AND METHODS

This Prospective study was conducted in the Department of Pathology, Government Medical College, Wanaparthy, Telangana, after obtaining approval from the Institutional Ethics Committee.

Study Design: Prospective study

Study Period: The present study was conducted during January 2024–December 2025

Source of data: OPD cases referred for lymphnode FNAB by treating surgeon of Government General Hospital, Wanaparthy.

Sample size: 90

Sampling procedure Data collected from the records of Government General Hospital Wanaparthy

Inclusion Criteria: All patients who underwent lymph node FNAC during the study period.

Exclusion Criteria: Cases with inadequate clinical or cytological data.

Procedure: FNAC was performed using standard technique. Smears were fixed in ethyl alcohol and stained with hematoxylin and eosin. Cytological findings were reviewed and categorized according to the Sydney Reporting System.

RESULTS

Table 1: Age wise distribution of patients

Age group	Number of cases	Percentage
0-10	5	6%
11-20	16	18%
21-30	11	12%
31-40	25	27%
41-50	14	16%
51-60	5	6%
61-70	8	9%
71-80	3	3%
80+	3	3%

Table 2: Site wise distribution of lymph node FNAC

Most common site:

Right cervical lymph nodes-32.22%

Followed by left cervical -21.11%

Table 3: Distribution of cases according to Sydney Reporting System categories

Sydney category	Number	Percentage
Category I	4	4%
Category II	77	86%
Category III	1	1%
Category IV	2	2%
Category V	6	7%

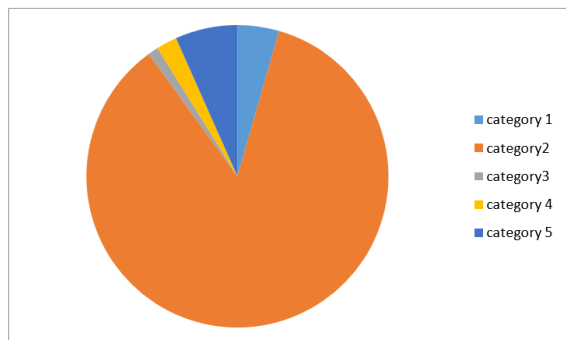


Figure 1: Pie chart showing distribution of cases according to Sydney categories

A total of 90 cases were included in the study. The most affected age group was 31–40 years (28%). Cervical lymph nodes were the most commonly involved site, with right cervical nodes accounting for 32% of cases. According to the Sydney reporting system, the majority of cases were categorized as Category II (Benign) comprising 86%, followed by Category III/IV (3%), and Category V (7%).

The majority of cases belonged to the benign category, followed by granulomatous lymphadenitis. Cervical lymph nodes were the most common site aspirated.

DISCUSSION

FNAC is a well established first line diagnostic tool for the evaluation of lymphadenopathy. The Sydney Reporting System was developed to overcome variability in reporting and to standardize lymph node FNAC interpretation¹. In the present study, benign lesions predominated, a finding consistent with previous studies by Caputo et al,^[3] and Verma et al.^[4] Granulomatous lymphadenitis constituted a significant proportion of cases, reflecting the high prevalence of tuberculosis in the Indian subcontinent. Similar observations have been reported in Indian studies applying the Sydney system.^[4,5] Reactive lymphadenitis was commonly encountered across a wide age range, emphasizing the importance of FNAC in avoiding unnecessary surgical biopsies. Although malignant lesions formed a smaller subset, standardized categorization assists clinicians in identifying cases requiring further evaluation. Recent literature suggests that even FNAC only studies without histological correlation provide meaningful epidemiological and clinical insights when standardized systems are used.^[6]

CONCLUSION

The present study demonstrates that the Sydney Reporting System is a feasible and effective framework for lymph node FNAC reporting in routine practice. Its use promotes uniform reporting, enhances diagnostic clarity, and supports appropriate clinical decision making.

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