

FINE NEEDLE ASPIRATION BIOPSY DIAGNOSIS OF TUBERCULOUS LYMPHADENITIS IN PATIENTS WITH AND WITHOUT ACQUIRED IMMUNE DEFICIENCY SYNDROME

AN Hemalatha¹, YA Manjunath² & CJ Prakash³

INTRODUCTION

Tuberculosis (TB) is an age-old disease, which apparently appeared under control has become more common with patients suffering from Acquired Immuno Deficiency Syndrome (AIDS). Lymphnodes are commonly infected by Mycobacteria in patients with AIDS. Lymphnodes are superficial and freely accessible for Fine Needle Aspiration Cytology (FNAC). In such **patients, purulent** inflammation comprises a significant component of histologic picture of tuberculous lymphadenitis. Granulomas are often present in patients with good immune response.

This study has been taken up mainly to compare cytological findings between two groups of patients suffering from tuberculous lymphadenitis with and **without** HIV seropositivity.

MATERIAL AND METHODS

The material for present study obtained from 40 patients in OPD at KC General Hospital (KCGH) Bangalore, Ambedkar Medical College Hospital (AMCH), Bangalore and Lady Willingdon Centre (LWC), Bangalore during the year 1995 to 1997. All aspirates were obtained from sputum smear positive cases presenting with cervical/supraclavicular/inguinal lymphnodes which showed purulent, acute and granulomatous inflammation. These aspirates were obtained from patients in different age groups i.e., 10 to 60 years. FNAC was performed using 21-23 gauge needle. Smears were either air dried or wet fixed in 95% alcohol. The smears were stained with leishman's and kinyon staining. After screening the leishman stain smear were classified into three categories based on their cytomorphologic features.

Type - I - Neutrophils with caseous material only

Type - II - Neutrophils with or without caseation

Type - III - Smears with neutrophils and significant granulomatous component.

ANALYSIS

Fine Needle Aspiration Biopsy was carried out in 40 patients at KCGH, AMCH, and LWC, who are suffering from lymphadenitis. All 40 patients were positive for TB on sputum smear. Out of which 10 patients had serological positivity for HIV infection and 30 were negative for serological HIV tests.

Cytological findings in AIDS associated with TB

- Neutrophils with caseous material only
- Neutrophils with rare granulomas with or without caseation

Cytological findings in Tuberculous lymphadenitis

Type - I - Epithelioid granulomas without necrosis

Type - II - Epithelioid granulomas with necrosis

Type - III - Necrosis alone

Acid Fast Bacilli (AFB) positivity is maximum in Type - 3

Granulomas tend to be less numerous in AIDS than in non-AIDS patients.

DISCUSSION

The purulent aspirate from cervical supraclavicular masses in AIDS in patients population is caused by infection with Mycobacterium tuberculosis. The two significant criteria for diagnosing Mycobacterial infection in routinely stained smears are caseous material and granulomas.

Granulomas tend to be less numerous in AIDS patients than in Non Aids patients. However this feature was not specific entirely as shown in Table. Caseous material was not sensitive and specific indicator of Mycobacterial infection in routinely stained smear. The numerous AFB seen in Acid stained smears tend to correlate with AIDS status. AIDS patients more likely to have abundant AFB in their smears than in Non-AIDS patients Cytological

¹ Assislanl Professor, Dept of Pathology, ²Profressor of Pathology.

³HOD, Dept of Pathology - Dr BR Ambedkar Medical College, Bangalore

Table : Comparison of cytological pattern of tuberculosis associated **with AIDS with other study**

Authors	Total No. of Cases	Type- I	Type- II	Type- III
Our Studies	10	05	04	01
Michael F et al	10	06	03	01

specimen stained for AFB in our findings suggest that kinyon acid stain is effective screening test for AFB patients with AIDS.

REFERENCES

1. Michael F: FNA diagnosis of Tuberculous lymphadenitis in Aids; **Acta - cytol 1991, 35, 325-332.**
2. Klatt EC, Jensen DF & Meyer PR: Pathology of Mycobacterium avium-intracellulare infection in acquired immune deficiency syndrome; **Hum-Pathol 1987,18, 709-714.**
3. Meena SM & Gita Jayaram: Acid fast bacilli in aspiration smears from tuberculous lymphadenitis; **Acta-cytol 1987, 31, 17-19.**