

**RAJIV GANDHI INSTITUTE OF MEDICAL SCIENCES**  
**( RIMS ) , ONGOLE**  
**CME PROGRAMME**

29.12.2013

**Organising Department :**

Dept Of Pathology , RIMS , Ongole .

**Topic For Discussion :**

**“ DIAGNOSIS OF TUBERCULOUS LYMPHADENITIS  
COMBINING CYTOMORPHOLOGY WITH  
MICROBIOLOGICAL METHODS .”**

**Key Words :**

- Mycobacterium Tuberculosis
- Fine Needle Aspiration Cytology
- Culture
- Lymphadenitis

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**Participants :**

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## ABSTRACT

Tuberculosis remains a world - wide public health problem despite the fact that the causative organism was discovered more than 100 years ago and highly effective drugs and vaccine are available .

India accounts for nearly one third of global burden of tuberculosis .

Tuberculosis is a chronic infectious disease caused by mycobacterium tuberculosis . It may present with many clinical and pathological patterns. while pulmonary TB is the most common presentation , lymphadenopathy is the most frequent presentation of extrapulmonary tuberculosis .

Extra pulmonary TB is on the increase world over . In india 10 - 20 % of new TB cases may be extrapulmonary , while among HIV positives it could be 50% . In India almost two thirds of the cases of lymphadenopathies are due to tuberculosis.

Diagnosis of extrapulmonary TB is often made on histopathology when there is caseous necrosis in granulomatous lymphadenitis . The chances of identifying Acid Fast Bacilli in a tissue section are much lower .

Mycobacterial culture is the gold standard method for detection of the bacilli . However the mycobacteria are slow growing and it takes 6 to 8 weeks to grow on conventional Lowenstein - Jensen medium .

The sensitivity of direct smear microscopy for AFB is not optimal as the minimum number of bacilli necessary to produce a positive smear has been estimated to be minimum 5000 to 10,000 per ml.

Most often superficial lymphnodes are affected in tuberculosis and are accessible for fine needle aspiration without radiological guidance. The aspirate obtained from the affected lymphnodes can be used for cytological assessment , Ziehl - Neelsen stain and culture .

The presence of epithelioid cells either with or without caseous necrosis or a positive Ziehl - Neelsen stained smear are the best diagnostic criteria in the diagnosis of tuberculosis and have very good agreement with the gold standard .

In conclusion , fine needle aspiration cytology is simple , easy , less time consuming , less painful, inexpensive out patient procedure having highest agreement with gold standard in the early diagnosis of tuberculous lymphadenitis .The material obtained through FNAC can be subjected to other diagnostic tests like AFB stain , culture & PCR.