

Original article:

Comparative study of traditional tests VS CBNAAT in diagnosing tuberculous lymphadenopathy-a one year clinical study (2017-'18) At KIMS, Amalapuram

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ABSTRACT

In India and some other developing countries tuberculosis is the first differential diagnosis for a patient who presents with chronic lymph node enlargement.(1,2,3)This is the commonest form of extra pulmonary tuberculosis in both HIV and Non- HIV patients.HIV infected patients usually have evidence of pulmonary disease but only 25 - 30% HIV negative patients have evidence of pulmonary involvement.Childhood tuberculosis accounts about 10%of all tuberculosis.Extra pulmonary tuberculosis appears to be increasing in children and lymphadenopathy is the most,among all extra pulmonary tuberculosis.Traditionally we are using FNAC OR lumphnode biopsy for diagnosing lymphnode tuberculosis but the Gene Xpert(CBNAAT) Assay is a major breakthrough in diagnosis of Lymphnode Tuberculosis.WHO recommends Gene Xpert to be used as initial diagnostic test in patients suspected of having tuberculosis.We use FNAC,lymphnode biopsy and CBNAAT for diagnosing lymphnode tuberculosis and increased our case notification rates of extra pulmonary tuberculosis.

INTRODUCTION

The Global Tuberculosis Bulletin reported 9.6 million new TB cases in 2014.India is the global capital of the tuberculosis with an estimated 2.2 million active TB cases as on 2016 (4) . In developing countries ,where tuberculosis is still rampant,TB lymphadenopathy is one of the most common causes of lymphadenopathy.Rapid diagnosis and adequate treatment are very important.as a primary diagnostic test ,FNAC has provided an efficient alternate to lymphnode excision biopsy.cytologic diagnosis can be made with features of well formed epitheloid granulomatous inflammation .Gene X-pert test is a major milestone in diagnosing extra pulmonary tuberculosis(5).The study was performed to compare the role of FNAC and CBNAAT to diagnose TB lymphadenopathy.

MATERIALS AND METHODS

All patients attended our Pulmonology O.P.D of K.I.M.S Amalapuram with swollen lymphnodes were included in the study. Also patients referred other departments like general surgery ,ENT are included.

All the swellings ,we took FNAC or lymph node biopsy for cytology or histopathological examination.

We sent aspirated material from lymph node for CBNAAT.

We confirmed the diagnosis by FNAC, lymph node biopsy and CBNAAT and compared the results. Investigations like Chest X-ray, Mantoux test, ESR, HIV, FBS were sent routinely for all patients for complications.

RESULTS:

Total No. of suspected lymph node patients in chest OPD :130

No. of patients referred from other OPDs:12

No. of metastatic cancer patients:2

No. of FNAC confirmed TB lymph nodes:47

No. of lymph node biopsy confirmed cases:2

No. of CBNAAT confirmed cases: 26

No. of non-specific inflammatory cases:45

No. of Non-LN EPT patients:45

No. of Tuberculosis Lymph node patients:75

% of FNAC confirmed TBLN cases:41.9%

% of CBNAAT confirmed TBLN cases:60%

Total Percentage of CBNAAT+FNAC confirmed Lymph node Tuberculosis:66.9%.

If you combined together both CBNAAT and FNAC for LN TB diagnosis, we achieve 100% results and we can successfully replace LN Biopsy which is a time consuming and tedious process for diagnosis.

DISCUSSION:

Tuberculosis is a major communicable disease worldwide. According to WHO TB Report 2014, 9 million cases of tuberculosis patients globally with India contributing to 24% of global burden (4). Among extrapulmonary tuberculosis, lymphadenopathy is the most common accounting for 67% of cases. Early detection of tuberculosis is vital for the successful treatment of the disease and reduction of disease transmission. The Gene Xpert M.TB /RIF ASSAY is a major breakthrough in tuberculosis detection. The WHO recommends that TB lymphadenitis should be treated for 6 months with 2HRZ/4HR either daily or twice weekly. The role of surgery in the management of TB lymphadenitis is limited either for diagnostic purpose or excision in case of those failed to show improvement after adequate ATT. Recently RNTCP has included CBNAAT for MTB Gene Xpert for TB diagnosis. (6) Gene Xpert MTB/RIF is an automated Cartridge Based molecular test that simultaneously detects M.tuberculosis and Rifampicin Resistance within 2 hours. Gene Xpert MTB/RIF test is a simple method with an overall sensitivity of 97.6% and specificity 99.2% (7). Introduction of CBNAAT increased the case notification of all TB lymph node cases. (8)

CONCLUSION:

WHO recommends Gene Xpert to be used as the initial diagnostic test in patients suspected of having tuberculosis. The combined use of FNAC and CBNAAT provides a rapid diagnosis in the management of TB lymphadenopathy without lymph node biopsy.

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