Evaluation of Xpert MTB/RIF for diagnosis of tubercular lymphadenopathy

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Background: Extra pulmonary TB (EPTB) constitutes 15-20% of all TB cases globally. The most common form of EPTB is lymph node TB (LNTB). Culture remains the gold standard for diagnosis; however, its sensitivity is low. Hence, other modalities are needed for rapid and accurate diagnosis

Materials & Methods: 345 adult patients with lymphadenopathy from outpatient and inpatient departments of AIIMS, New Delhi were recruited between April 2015 and June 2016 after obtaining written informed consent. All patients were subjected to either FNAC or excision biopsy. Zeihl-Neelsen staining, Xpert MTB/RIF, liquid culture by MGIT 960 and histopathology was done and response to treatment was assessed at three months. Xpert MTB/RIF was compared against a composite reference standard (CRS) using standard 2×2 table. Definite cases by CRS were those that were culture positive whereas probable and possible cases included those with symptoms, positive ZN stain or histopathology and those who responded to treatment.

Results: Out of 345, 185 were males and 160 were females with a mean age of 31.69 years. 18 patients were retro positive and 57 patients were treatment experienced. 185 patients underwent FNAC out of which 70 (42.6%) were inconclusive as compared to three (1.8%) in the biopsy group. Among ATT naïve patients which were definite by CRS, Xpert MTB/RIF had a sensitivity of 81.03% (69.15-89.07) with a specificity of 98.01% (94.32-99.32). In ATT experienced definite cases, sensitivity was 77.8% (54.78-91) and specificity was 100% (74.12-100). Similar results were seen in ATT naïve/experienced “probable/possible” cases.

Conclusions: It can be concluded that Xpert MTB/RIF could be used as a rapid and accurate test for diagnosis of LNTB irrespective of prior treatment status of the patient. Also excisional biopsy may be preferred for obtaining samples in patients with easily accessible nodes due to better yield.

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