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Role of Interferon-Gamma Release Assay in Evaluation of Suspected Active Tuberculosis

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Abstract

Background: The Global burden of TB remains enormous, despite standardized care and availability of treatment through DOTS and other standard regimens for individual treatment. To this day Tuberculosis constitutes a major public health burden affecting one-third of the world's population. We aimed the role of IGRA with QuantiFERON TB-Gold IN TUBE ASSAY, in the evaluation of suspected active tuberculosis. **Methods**: A total number of 53 subjects were included in the study, Complete blood picture, ESR, complete urine analysis, RBS, HIV, Serum creatinine, Blood urea, LFT were done. Wherever samples could be obtained, by suitable invasive and non-invasive methods, were subjected to histopathological examination, Bacterial and fungal cultures, and fluid analysis. All the subjects underwent a Tuberculin skin test and QuantiFERON TB Gold in Tube assay. **Results**: Patient with malignancy had both QuantiFERON-TB Gold In-Tube test (QFT-GIT) and TST positivity and was not started on treatment with ATT. Chest x-ray was abnormal in 24 patients (45.6%) and 54.7% of patients have a normal x-ray. The most common abnormal finding was pleural effusion in 50% and consolidation in 45.8% and lymph node enlargement of the hilar region seen in one patient. The overall Sensitivity, Specificity, PPV and NPV for QFT-GIT was 85.29%, 88.24%, 93.55% and 75% respectively similarly the TST 91.43%, 50%, 78.05% and 75%. **Conclusion**: A positive QFT-GIT result improved clinical evaluation of tuberculosis suspects, especially in patients where a diagnostic confirmation was not possible, viz., extrapulmonary TB, and FUO. IGRAs are superior to the TST because they are unlikely to be falsely positive. Further studies setting different cut-off values for active TB and LTBI and lower cut-off values for IGRAs in high burden countries may show realistic values for this assay in the diagnosis of active TB.