



Title	Interferon Release Assays (Igras) for Diagnosis of Latent Tuberculosis Infection and Active Tuberculosis
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Aim

To assess the efficacy/effectiveness of interferon- γ release assays (IGRAs) versus the tuberculin skin test (TST) in diagnosing latent tuberculosis infection (LTI) and tuberculosis (TB).

Conclusions and results

For diagnosis of LTI, contact studies have reported a sensitivity (S) of around 50% for the T-SPOT test and a lower S for the QuantiFERON-TB Gold In-Tube (QFT-GIT) test (11%-42%). Among HIV-positive and drug-dependent subjects, the QFT-GIT (60%-90%) appears to be more sensitive than the T-SPOT (33%-50%). The T-SPOT was observed to have higher S among military and immunocompromised (rheumatoid arthritis) subjects (100%). IGRAs registered a specificity (SP) >70% in diagnosis of LTI, except in the case of drug-dependent subjects among whom the QFT-GIT achieved an SP of 67%. As regards diagnosis of TB, both the T-SPOT and QFT-GIT displayed sensitivities comparable to that of TST, while IGRAs seemed to be more specific than the TST.

Recommendations

IGRAs are useful tests for ruling out LTI, since they display a higher SP than does the TST. Nevertheless, a positive result in such tests, ie, suspicion of LTI, should be confirmed with imaging and/or microbiological tests. The Spanish Society of Pneumology and Thoracic Surgery (Sociedad Española de Neumología y Cirugía Torácica - SEPAR) has proposed that in vitro interferon- γ techniques could be used to confirm a negative result for TST in immunodepressed subjects, and a positive result in vaccinated subjects. Hence, if the test were negative, LTI would be ruled out, and if it were positive, infection would be confirmed.

Methods

In February 2010, we systematically reviewed the literature using the following databases: Cochrane Library Plus, NHS Centre for Reviews and Disseminations,

Clinical Trials, MEDLINE, and EMBASE. Papers were selected on the basis of pre-established inclusion and exclusion criteria. The information was summarized in evidence tables, and study quality was assessed using a specific scale.

Further research/reviews required

Studies targeting larger samples in different population groups are needed to identify subjects in whom these tests would be more cost effective.