INDETERMINATE IGRA RESULTS PRIOR TO ANTI-TNF THERAPY: STABLE STATE TESTING MAY BE IMPORTANT FOR IMMUNE-MEDIATED INFLAMMATORY DISORDERS

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Introduction
Screening for active tuberculosis (TB) and latent TB infection (LTBI) is mandatory prior to the initiation of anti-TNF therapy in patients with immune-mediated inflammatory diseases (IMID). In 2010, our local guideline included QuantiFERON®-TB Gold (QFT) as well as clinical risk stratification. However, indeterminate QFT results were increasingly identified in this population, higher than that observed in other published series.

Aims
To identify patient and IMID characteristics that may be contributing to indeterminate QFT results and LTBI diagnostic uncertainty.

Methods
We conducted a retrospective study of all patients that had received at least one dose of anti-TNF since 2010. Data obtained included patient demographics, TB risk stratification and QFT results.
Implications of NICE 2016 Tuberculosis Guidance

Introduction

NICE 2016 Tuberculosis guidance recommends significant changes in contact screening. Tuberculin Skin Test (TST) is advocated for diagnosis of latent tuberculosis infection (LTBI), with a positive TST redefined as 5 mm regardless of BCG status, IGRA only to be used in diagnostic uncertainty, upper age for LTBI treatment raised from 35 to 65, and contact tracing no longer recommended for extra-pulmonary TB.

We use a 2 step test, with IGRA for those with TST > 10 mm in context of BCG, and treat LTBI on basis of IGRA result. We aimed to assess the implications for our service of adopting the new guidance.

Results

181 patients (M:F 87:94; age range 11–83; average age 44.8 years) had received at least one dose anti-TNF and were included in this study (see Table). The majority of patients had colitis (n = 143; 79%). 52 patients (28.7%) did not have a documented QFT or IGRA (interferon gamma release assay) result. LTBI was diagnosed in 8 (6.2%) with reactive QFT of whom 7 completed chemoprophylaxis and 1 was referred for further investigation and treatment elsewhere. 95 (73.6%) were QFT non-reactive. 26 (20.2%) were QFT indeterminate, all of whom had a diagnosis of colitis. Colitis patients were more likely to be QFT indeterminate if they were tested at the time of rescue anti-TNF with or without surgery (RR 5.71; 95% CI: 2.49–13.09; p < 0.0001). 2 patients who received rescue anti-TNF and were subsequently found to be QFT reactive, successfully completed LTBI chemoprophylaxis.

Conclusion

The rate of indeterminate QFT results is higher than expected in our cohort of patients with colitis who require rescue anti-TNF therapy and is likely to be related to the timing of testing. If QFT testing is undertaken, this should be performed when patients are at stable state and not at the time of inflammatory crisis.

Screening Outcomes of Household Contacts of Multidrug-Resistant Tuberculosis Patients in Peshawar, Pakistan

Objective

To assess the profile of TB/multidrug-resistant TB (MDR-TB) among household contacts of MDR-TB patients.

Methods

We reviewed written and electronic records for all contacts screened in Leeds in 2015. NICE 2016 guidance was applied retrospectively to assess the impact of each recommendation and the guidance as a whole.

Results

216 contacts were screened. Full records were available for 193. 14 were treated for LTBI, 2 for active TB, and 6 contacts over 35 had X-ray follow up. 34 had TST > 10 mm, an additional 13 had TST 5–9 mm. Of 34 with TST > 10 mm, 14 (41%) had positive IGRA. 97/193 (50%) were contacts of extrapulmonary tuberculosis. 4 of these were treated for LTBI, but 21 had TST > 5 mm.

Using TST > 5 mm cut off would increase the number of IGRA tests from 34 to 46. Treating on basis of TST alone would increase the number given chemoprophylaxis from 14 to 46. Stopping screening for contacts of extrapulmonary cases would reduce the number screened by 50% and the number treated from 46 to 29. However, this would be at the cost of missing at least 4/14 LTBI with positive IGRA.

Conclusion

Adopting the new NICE guidance in full would reduce the number screened but significantly increase the numbers treated for LTBI. Using the 2 step test with a TST cut off of 5 mm would modestly increase the number of IGRA tests but would be unlikely to have a large impact on the number treated. Stopping screening for contacts of extrapulmonary TB would reduce the screening workload by 50% but reduce the number of LTBI cases diagnosed by 29%.