



AB008. Utility of repeat latent tuberculosis testing in patients with immune-mediated diseases taking biologics

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Background: Guidelines for repeat latent tuberculosis infection (LTBI) testing while on biologics are not clearly defined. The CDC and U.S. Preventive Services Task Force recommend routine serial LTBI screening in high-risk patients, such as those on immunosuppressive medications. Furthermore, recommendations for annual LTBI screening in patients on biologics have been incorporated into the Medicare Merit-Based Incentive Payment Systems and will impact physician reimbursement. However, little evidence supports that this practice is clinically valuable and/or cost-effective in patients on biologics. To evaluate the utility of serial LTBI screening in patients taking biologics and to identify risk factors in patients who convert from negative to positive QuantiFERON TB test (QFT) results while on biologics.

Methods: We retrospectively reviewed QFT results in patients treated with biologics for chronic immune-mediated inflammatory/autoimmune conditions (IMIDs) at a single, tertiary care center from 2007–2019. For each patient included in our study, detailed clinical information from their medical records was collected.

Results: We identified 5,212 patients who had IMIDs and >1 repeat QFT result after starting biologic therapy. The most common IMID diagnoses were inflammatory bowel disease (30%), rheumatoid arthritis (28%) and psoriatic disease (24%). The majority of patients had all negative QFTs (87.5%), whereas 172 patients (3.3%) had >1 positive QFT. Amongst patients with positive QFTs, 61/172 patients (35%) converted from a negative to a positive QFT after biologic therapy initiation. Of these 61 patients, only 28 patients were eventually treated for LTBI. Fourteen of the 28 patients treated for LTBI had documented risk factors for TB exposure, such as travel to endemic TB areas and/or exposure to individuals with TB. Only one case of active TB was diagnosed.

Conclusions: This represents the largest single-institution study evaluating rates of QFT test positivity conversion in patients taking biologics. Repeat LTBI testing in patients taking biologics revealed a low rate of conversion (1.17%). Our results suggest clinical utility and cost-effectiveness of repeat LTBI screening in patients on biologics may be more valuable if not performed routinely, but driven by a focused review of TB exposure risk factors in each patient.

Keywords: Biologics; immune mediated diseases; latent tuberculosis; interferon gamma release assay; QuantiFERON TB test (QFT)

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