TUBERCULOSIS SCREENING IN LOUISIANA HIV POSITIVE INDIVIDUALS DURING 2010

Smith LC, DeGraw C, Trachtman L, Gruber, D, Longfellow L.

Testing for latent *Mycobacterium tuberculosis* infection (LTBI) has always been difficult because there is no ‘gold standard’ to confirm LTBI or culture-negative active tuberculosis. Screening for LTBI or active TB was usually done by a tuberculin skin test (TST). TST can produce false-positives if the individual has nontuberculous mycobacteria or has been vaccinated with Bacille Calmette-Guerin (BCG). Additionally, individuals with suppressed type IV delayed hypersensitivities or T-lymphocyte function could have a false-negative result. Interferon gamma release assays (IGRAs) are newer tests that have been developed to aid in the diagnosis of TB with improved sensitivity and specificity compared to the TST. In 2001, the QuantiFERON-TB test (QFT) became the first IGRA test approved by the FDA, in 2005 QFT-G was approved, in 2007 the QFT-GIT was approved, and in 2008 the FDA approved the fourth IGRA, T-SPOT. *TB* (T-SPOT), for the aid of TB diagnosis. The Centers for Disease Control and Prevention (CDC) acknowledges there is limited data on the use of IGRAs in immunocompromised individuals. They also acknowledge there are few published reports on T-SPOT providing sensitivity information in persons with immunosuppressive conditions. Of the studies that were done, they found at least comparable results with the TST to more positive results. In 2010, Louisiana Department of Health and Hospitals Office of Public Health TB Control Program began implementing the use of T-SPOT in lieu of the TST. The purpose of this study is to look at the HIV positive population who received testing for TB, look at the demographics of the population, types of tests used, and the results from those tests. In 2010, 3306 people were screened for TB, of those 64 (3.3%) were HIV positive, 1274 (66.4%) were HIV negative, 454 (23.7%) were not offered HIV testing, 10 (0.5%) refused HIV testing. The majority were black (84.1%), males (71.9%), from US origin (93.2%). For TB screening among HIV positive individuals 21 (32.8%) had a PPD test, 46 (71.9%) had T-SPOT, 9 (14.1%) had QFT* (* type of QFT unknown) test performed. Among those HIV positive individuals who had: 1) PPD: 9 had negative (indurations less than 5 mm), and 12 had positive (indurations greater than 5 mm); 2) T-SPOT: 33 had negative and 13 had positive T-SPOT results; or 3) QFT*: 9 had positive and there were zero negative QFT* results. There was a significant difference between PPD and T-SPOT tests while controlling for HIV status, $\chi^2 = 2.25$ (1.28-3.96), p-value 0.0035. The $\chi^2$ test could not be computed for QFT* due to zero values. The above data suggest that more research needs to be done to decide if one screening test for TB is optimal among persons who are HIV+ or persons with other immunosuppressive conditions screening. The QFT* is not a test ordered by Louisiana Office of Public Health, but is offered by many other health care providers. Further studies need to be done dedicated to the HIV population for TB screening.