

Unnecessary Quantiferon testing in a Young Man Previously Treated for Latent TB

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Story from the Frontline:

A man in his 30s was seen in clinic to establish care. He was generally healthy, and asymptomatic at time of evaluation. He had no chronic diseases and took no medications on a daily basis. He had never smoked and drank alcohol only on social occasions. He was from Vietnam and had come to the United States when he was approximately 16 years old.

He reported that initially on arriving in the United States he had tested positive for latent tuberculosis and received what he remembered as a 3 month course of a single unknown medication due to this diagnosis. He never had active disease and had no known sequelae of treatment. His physician knew of no recommended 3 month monotherapy regimens for latent TB and so was concerned that latent TB was undertreated. To help assess need for a repeat course of treatment for latent TB a Quantiferon gold test was ordered and resulted positive. After further discussion with patient and reading relevant guidelines and evidence on latent TB testing and treatment, the positive test did not change management and no further treatment or testing was pursued.

Teachable Moment:

Current USPSTF guidelines recommend screening for latent TB in patients at increased risk. This includes patients born in high risk countries regardless of length of time spent in United States (B recommendation)ⁱ. This change was made relatively recently after it was found that the risk of reactivation did not decrease with increasing time since presumed exposure leading to latent TBⁱⁱ. In the case of our patient initial screening for latent TB would have been appropriate except that he had already been appropriately screened and treated based on the results. Recommended treatment courses for latent TB vary, but the goal is always the same; to reduce the probability of reactivation, rather than cure the disease. Nine month courses of INH are estimated to decrease the risk of reactivation by around 90%ⁱⁱⁱ. Though not considered first line treatment, 3 months of monotherapy (presumed to be with INH in his case) is also likely to reduce the risk of reactivation, though it is difficult to estimate the absolute lifetime risk reduction. Regardless of previous treatment duration however, repeat screening tests are not recommended as they are likely to be positive indefinitely. Studies have varied, but in one convincing prospective case series none of a small number of patients who were quant gold positive became quant gold negative after 9 months of INH therapy^{iv}.

ⁱ US Preventive Services Task Force. Screening for Latent Tuberculosis Infection in Adults US Preventive Services Task Force Recommendation Statement. *JAMA*. 2016;316(9):962–969. doi:10.1001/jama.2016.11046

ⁱⁱ Walter ND, Painter J, Parker M, et al. Persistent Latent Tuberculosis Reactivation Risk in United States Immigrants. *American Journal of Respiratory and Critical Care Medicine*. 2014;189(1):88-95. doi:10.1164/rccm.201308-1480OC.

ⁱⁱⁱ Efficacy of various durations of isoniazid preventive therapy for tuberculosis: five years of follow-up in the IUAT trial. International Union Against Tuberculosis Committee on Prophylaxis. *Bull World Health Organ*. 1982;60(4):555-64

^{iv} Pollock NR, Kashino SS, Napolitano DR, et al. Evaluation of the Effect of Treatment of Latent Tuberculosis Infection on QuantiFERON-TB Gold Assay Results. *Infection control and hospital epidemiology : the official journal of the Society of Hospital Epidemiologists of America*. 2009;30(4):392-395. doi:10.1086/596606.