

Latent Tuberculosis Infection Diagnosis Using QuantiFERON-TB Gold Plus Kit Among Correctional Workers: A Cross-Sectional Study in Francisco Beltrão-PR, Brazil

Trevisol, Maicoa;
Moreira, Thiago Possb;
Sanvezzo, Gustavo Henrique Baracab;
Guedes, Sthefanny Josephine Klein Ottonic;
da Silva, Danilo Rodrigues Pereirad;
Wendt, Guilherme Weltere;
Coelho, Harnoldo Colaresf;
Ferreto, Lirane Elize Defantee

Abstract

Correctional workers form a high-priority group for tuberculosis control measures because of their high exposure and risk. This cross-sectional study conducted in April and May 2022 included 71 criminal police officers from the State Penitentiary of Francisco Beltrão-PR, Brazil. Their sociodemographic and laboratory data were collected. Latent tuberculosis infection (LTBI) was assessed using a QuantiFERON-TB Gold Plus in-tube test kit. Binary logistic regression was applied to calculate the odds ratios (ORs) and 95% confidence intervals (CI) of the LTBI predictors. The prevalence of LTBI was 22.6% (95% CI, 12.8–32.2%). Factors associated with LTBI were age > 43 years (OR, 0.18; 95% CI, 0.04–0.70; $p < 0.014$) and the use of medications (OR, 5.13; 95% CI, 1.40–18.87; $p < 0.014$). The prevalence was close to that estimated worldwide for LTBI in correctional workers, reinforcing the need for occupational health control measures consisting of regular screening and treatment of positive cases of latent infection among correctional workers to reduce the risk of illness and spread of infection in the penitentiary system and community. © 2023, The Author(s), under exclusive licence to Springer Science+Business Media, LLC, part of Springer Nature.

Author keywords

Latent tuberculosis; *Mycobacterium tuberculosis*; Occupational health; Prison