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COMPARATIVE SCREENING FOR LATENT TUBERCULOSIS INFECTION AMONG FILIPINO HEALTHCARE WORKERS USING QUANTIFERON[®]TB GOLD IN-TUBE AND TUBERCULIN SKIN TEST

Almira Teodoro Daguman, Almira Teodoro Daguman. *Clinical Investigation Department, United Laboratories, Inc, Mandaluyong, Philippines*

10.1136/bmjopen-2015-forum2015abstracts.48

Background Persons with latent TB infection (LTBI) can develop active disease and transmit the infection to others. There is paucity of data on LTBI among Filipino healthcare workers (HCW) using available diagnostic modalities.

Objectives The study aims to evaluate QuantiFERON[®]TB Gold in-tube (QFT-GIT) as a screening tool for latent TB infection (LTBI) among Filipino healthcare workers and compare the effectivity of QFT-GIT assay with tuberculin skin test (TST) and determine the agreement between the tests.

Methods This is a cross-sectional comparative study of 228 Filipino healthcare workers aged 20–60 years, with no history, signs, symptoms, and radiologic findings of active tuberculosis, conducted in a level 4 government hospital. TST was performed by injecting 5 TU tuberculin PPD and the IGRA was done using QFT-GIT. Study was approved by PhilFDA and Independent Ethics Committee of Rizal Medical Center.

Result Prevalence of LTBI was 79% and 41% as determined by TST and QFT-GIT, respectively. There was poor agreement between the two tests: 34% of subjects had positive results for TST and QFT-GIT; 13% had negative results for both tests to yield an overall agreement of approximately 47%. The participants who had been in health care service for less than a year had the lowest prevalence of TST positivity (73%). Except for the medical interns (44%), the majority in all job categories tested positive (64% to 91%). The proportion of BCG vaccinated individuals with positive TST results was slightly higher compared to the unvaccinated individuals (83% vs. 75%). Similarly, those exposed to the tubercle bacilli, either through an infected sputum specimen (78% vs 82%) or a household contact of TB (88% vs 78%) had slightly higher proportions with positive TST. Despite the controlled testing site, almost 5% dropped out as they failed to return for the TST reading.

Conclusion The study showed that the prevalence of latent tuberculosis infection as determined either through TST or QFT-GIT was high. Despite the controlled testing site, almost 5% dropped out as they failed to return for the TST reading. On the other hand, all participants underwent QFT-GIT determination. QFT-GIT eliminated the need for repeat visits, hence, maybe helpful in screening groups with low return rates for TST reading.

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