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Screening of laboratory workers for latent TB using interferon gamma assay

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Background: Latent tuberculosis infection is asymptomatic and untransmissible disease. According to the World Health Organization (WHO) Global Surveillance and Monitoring Project, in 2014 estimated incidence of TB is 181 per 100 000, with 40% of the population infected with TB in Pakistan and approximately one-third of the population is infected worldwide. Laboratory workers dealing with tan samples or TB patients are always at risk to get TB. In this study, we have investigated prevalence of latent TB in health care providers who are at risk to get TB to the cases of infectious tuberculosis using QuantiFERON assay.

Objective: To screen the lab workers at risk to occupational exposure for latent TB using QuantiFERON Assay.

Methodology: 3 ml of whole blood were collected into 3 specific QFT tubes (NIL, TB, Mitogen) from 60 lab personals including phlebotomists, medical technologist, doctors and faculty members working closely with TB samples or patients. Samples were performed for detection interferon specifically released against TB according to the manufacturer QuantiFERON TB Gold protocol.

Result: Out of 60 samples, 12 samples were found positive, 1 sample showed indeterminate result and 47 were found negative. Out of 12 positive samples 10 were from medical technologists working closely since long time with TB samples or TB patients, and 2 were from phlebotomists collecting samples from patients.

Conclusion: Health care providers usually work with TB infected samples with minimal infection control measures. This study shows the need for effective latent TB infection control measures and emphasizes on the importance to improve over all biosafety precautions during dealing with the TB patients or samples. The study also provides recommendations for routine and regular screening and checkup of the lab workers working with TB to ensure their safety rather safety of all as no one is safe until everyone is safe.

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