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LATENT TUBERCULOSIS INFECTION IN GERMAN HEALTHCARE WORKERS

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Introduction: Healthcare workers (HCWs) in Germany - a low incidence country - with contact to patients with tuberculosis (TB) are considered a high-risk group for latent TB infection (LTBI) and therefore are screened for TB. The German Occupational TB Network data is analyzed in order to estimate the prevalence of LTBI and to evaluate risk factors for LTBI.

Methods: The TB Network comprises 5,474 HCWs who were screened for LTBI with an Interferon Gamma Release Assay (IGRA). HCWs with a positive IGRA result were x rayed in order to exclude active TB. Risk factors for LTBI were assessed by a standardized questionnaire. Adjusted odds ratios (OR) were calculated by logistic regression using SPSS. In addition a head-to-head comparison of the QuantiFERON Gold in tube and the QuantiFERON Plus was performed in 134 students from high TB burden countries. In either of the two IGRA positive were 9.8%. Discordant results were observed in three participants with results very close to the cut-off. Agreement between the two IGRA was high ($k=0.85$).

Results: IGRA was positive in 393 HCWs (7.2%). Prevalence of LTBI increased with age. (OR for age >55 years 4.8; 95% CI 2.8-7.0), TB in history (OR 6.9; 95% CI 3.7-13.5), migration from a high incidence country (OR 2.2; 95% CI 1.7-2.8) and working on an infection ward (OR 1.9; 95% CI 1.1-3.3) or in geriatric care (OR 1.7; 95% CI 1.0-2.9). No active TB was diagnosed.

Conclusion: Even though screening was performed in HCWs with contact to TB patients only, work related risk factors for LTBI were identified. The new version of the QuantiFERON agrees well with the earlier version.

Biography

He was the Research Associate of the Professional Association for health service and welfare (BGW). Since 2010 he is Professor at the University Medical Center Hamburg Eppendorf (UKE). He is also Specialist in occupational medicine, epidemiologist.

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