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**The risk of tuberculosis in patients with diabetes mellitus from an Asian tertiary hospital**Yong Yang<sup>1,2</sup>, Ming Ming Teh<sup>1,2</sup>, Chian Min Loo<sup>1,2</sup>, Thuan Tong Tan<sup>1,2</sup>, Han Seong Ng<sup>1</sup> and Ban Hock Tan<sup>1,2</sup><sup>1</sup>Singapore General Hospital, Singapore<sup>2</sup>Duke-NUS Graduate Medical School, Singapore

**D**iabetics Mellitus (DM) has been associated with increased risk of developing tuberculosis (TB). However, information about the extent and risk factors for TB among Asian diabetic patients is scarce. The aim of this study was to assess the rate of TB in patients with DM, and investigate the effect of DM on TB using hospital administrative database. This is an historical cohort study of hospital discharge database from 2004 to 2015 to identify cases with DM and TB using International Statistical Classification of Diseases and Related Health Problems, 9/10th Revision, Australian Modification (ICD-9/10-AM) codes. Of 406751 hospitalized patients, 80493 (19.8%) patients had DM and 2358 (0.6%) patients had TB. Patients with DM had a significantly higher rate of TB (0.71% vs. 0.55%,  $p < 0.001$ ) compared to patients without DM. This higher rate was only present in the pulmonary TB group (0.62% vs. 0.44%,  $p < 0.001$ ) but not in the extrapulmonary TB group (0.11% vs. 0.08%,  $p = 0.053$ ). Logistic regression analyses showed that DM was a significant and independent predictor of TB (odds ratio 1.2, 95% CI 1.1-1.3,  $p < 0.001$ ) after adjustment for factors such as age, gender, ethnicity, admission class, nutritional deficiency, HIV infection, and other comorbid conditions. In conclusion, DM patients were found to have higher rates of TB in this group of Asian patient population. Active screening for latent TB should be considered for DM patients.

**Biography**

Yong Yang has completed his PhD at 2007 from National University of Singapore. He is the Director of Epidemiology Department of a large tertiary care hospital in Singapore. He has strong experience in epidemiological study with the usage of hospital discharge database. He has conducted hospital epidemiological and clinical research on chronic diseases and infection disease using the hospital discharge database for the past 10 years. He is currently developing a comprehensive hospital discharge database, which may be used to conduct epidemiological research in various fields. He has published more than 30 papers in reputed journals.

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