

The Effect of Type 2 Diabetes Mellitus on the Presentation and Treatment Response of Pulmonary Tuberculosis

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Background. Diabetes mellitus (DM) is a known risk factor for tuberculosis (TB), and with the increasing prevalence of type 2 DM in less developed regions, many patients with TB will have concomitant DM. Presently, little is known about the effect of DM on the clinical presentation and treatment outcome of TB.

Methods. In an urban setting in Indonesia, 737 patients with pulmonary TB were screened for DM and were followed up prospectively during TB treatment. Clinical characteristics and outcome were compared between patients with TB who had DM and patients with TB who did not have DM.

Results. DM was diagnosed in 14.8% of patients with TB and was associated with older age and a greater body weight. On presentation, diabetic patients with TB had more symptoms but had no evidence of more-severe TB. After 2 months, results of sputum microscopic examination was more often positive in diabetic patients (18.1% vs. 10.0%). After 6 months, 22.2% of cultured sputum specimens from diabetic patients were positive for *Mycobacterium tuberculosis* (adjusted odds ratio, 7.65;).

Conclusion. DM seems to have a negative effect on the outcome of TB treatment. The underlying mechanisms for the different response to treatment in diabetic patients with TB must be explored. Screening for DM and subsequent glycemic control may improve the outcome of TB treatment.