Title: Impact of diabetes mellitus on treatment outcomes of patients with active tuberculosis in an endemic area

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Body: Introduction. Diabetes mellitus (DM) is an emerging chronic health condition of developed and developing countries. Due to the association between diabetes and pulmonary tuberculosis (TB), diabetes may threaten the control of TB. Aims. We conducted a study to determine the prevalence of DM among TB patients, and to determine and compare treatment outcomes among TB patients with versus without DM. Methods. A retrospective cohort study included all patients with culture-confirmed TB diagnosed in 2010 and 2011, in west of the country. Results. Of 228 TB patients, 42 (18.4%) had DM. Patients with diabetes had 2.0 times higher odds of death than patients without diabetes (p = 0.18). Of the diabetic TB patients, 9.5% died within one month after starting TB treatment, compared with 3.5% of patients without diabetes (p = 0.09) Time to sputum culture conversion was longer in patients with diabetes than patients without diabetes (median 49 versus 39 days, p = 0.09). Two-month culture conversion proportions were similar (69% and 70%). There was no difference in the proportion of patients with baseline drug resistance, comparing patients with diabetes to patients without diabetes (14.3% versus 15.3%, p = 0.87). Treatment failure occurred in 4.1% of patients without diabetes and 6.7% of patients with diabetes (p = 0.51). Conclusions. In our TB patient population, DM was a risk factor for death, and it had a negative impact on treatment outcome. Enhanced medical vigilance, especially during the early part of TB treatment, is warranted.