

**Abstract.** Background: Tuberculosis-associated immune reconstitution inflammatory syndrome (TB-IRIS) is an important early complication of antiretroviral therapy (ART) in countries with high rates of endemic TB, but data from South-East Asia are incomplete. Identification of prevalence, risk factors and treatment outcomes of TB-IRIS in Malaysia was sought. Methods: A 3-year retrospective study was conducted among TB-HIV co-infected patients treated at the University of Malaya Medical Centre. Simple and adjusted logistic regressions were used to identify the predictors for TB-IRIS while Cox regression was used to assess the influence of TB-IRIS on long-term CD4 T-cell recovery. Results: One hundred and fifty-three TB-HIV patients were enrolled, of whom 106 had received both anti-TB treatment (ATT) and ART. The median (IQR) baseline CD4 T-cell count was 52 cells mL<sup>-1</sup> (13–130 cells mL<sup>-1</sup>). Nine of 96 patients (9.4%) developed paradoxical TB-IRIS and eight developed unmasking TB-IRIS, at a median (IQR) time of 27 (12–64) and 19 (14–65) days, respectively. In adjusted logistic regression analysis, only disseminated TB was predictive of TB-IRIS [OR: 10.7 (95% CI: 1.2–94.3), P = 0.032]. Mortality rates were similar for TB-IRIS (n = 1, 5.9%) and non-TB-IRIS (n = 5, 5.7%) patients and CD4 T-cell recovery post-ART was not different between the two groups (P = 0.363). Conclusion: Disseminated TB was a strong independent predictor of TB-IRIS in Malaysian HIV-TB patients after commencing ART. This finding underscores the role of a high pathogen load in the pathogenesis of TB-IRIS; so interventions that reduce pathogen load before ART may benefit HIV patients with disseminated TB. Additional keywords: antiretroviral therapy, antituberculosis treatment. Received 3 June 2014, accepted 14 August 2014, published online 9 September 2014

Introduction Tuberculosis (TB) is one of the major health problems among HIV-infected patients in resource-limited countries. South-East Asia harbours more than 40% of the global burden of TB cases. In 2011, the incidence of TB in Malaysia was estimated at 81 cases per 100 000 population. Of a total of 21 000 TB cases, 1 630 (9%) were co-infected with HIV. –1 A,B 2 Concurrent treatment of TB and HIV infection remains a challenge due to high pill burden, drug toxicity, drug–drug interactions and, tuberculosis-associated immune reconstitution inflammatory syndrome (TBIRIS), which affects up to 30% of patients in resource-limited settings. There have been no data reported from Malaysia.