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HIV and tuberculosis trends and survival of coinfection in a referral center in Tehran: A 12-year study

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ABSTRACT

Objective/background: The risk of mortality and morbidity among tuberculosis (TB) and human immunodeficiency virus (HIV) coinfecting patients is significantly higher than that of patients infected with TB alone. The aim of this study was to evaluate the survival of TB-HIV patients in a TB-referral center during a 10-year follow-up.

Methods: All TB-HIV patients in our referral center were enrolled in the study from 2003 to 2014, and patients were divided into two groups: HIV-TB patients without a history of TB treatment (new cases of TB) and HIV-TB patients with a history of TB treatment. Both groups were treated based on World Health Organization TB-treatment guidelines, and multivariate analysis was performed to evaluate risk factors of all-cause mortality.

Results: During the study, 22 HIV-TB patients with a history of TB treatment and 263 HIV-TB patients with newly diagnosed TB were included. Baseline demographic and clinical characteristics were similar, except that miliary TB (98% vs. 2%) and mortality (97% vs. 3%; $p = 0.06$) were more likely in HIV patients with newly diagnosed TB. During TB treatment and subsequent follow-up, two patients did not respond to treatment and 92 (32.3%) patients died, whereas the cure rate was 60%. Pneumothorax [hazard ratio (HR): 3.17], coinfection (herpes zoster, toxoplasmosis, cytomegalovirus infection, *Pneumocystis jiroveci*, candidiasis, and other opportunistic infection; HR: 1.75), CD4 < 100 cells/mL (HR: 1.96), thrombocytopenia (HR: 2.29), and lack of treatment with antiretroviral agents (ART; HR: 2.82) were significantly associated with all-cause mortality according to multivariate analysis.

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Conclusion: Our retrospective review of coinfecting TB-HIV patients hospitalized in Tehran showed that the management and monitoring of coinfection, pneumothorax and other adverse effects, as well as early initiation of ART, improved patient survival.

Conflicts of interest

The authors declare no conflicts of interest.