

Tuberculosis, HIV infection and antiretroviral therapy in Rio de Janeiro city, Brazil

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Background: TB/HIV co-infection remains high in Rio de Janeiro City (RJC). This study compared outcomes of TB in subjects who started TB treatment during 2003, HIV+ versus HIV- and, among HIV+, HAART versus non-HAART.

Methods: TB cases were obtained from the National Disease Surveillance System. TB outcomes were ascertained from clinics registries. HAART use was obtained from the RJC ARV database.

Results: There were 1,041 new cases of TB with both known HIV status and TB outcomes. 316 were HIV+ and 725 HIV-; among the HIV-, proportions of cure, default and death were 88.0%, 8.6% and 3.4%, while among HIV+ they were 70.6%, 15.8% and 13.6%, all reaching statistical difference ($p < .05$). The risk of death was almost 5 times greater in HIV+ vs HIV- [crude OR=4.91, 95%CI (2.83-8.53)], while risk of between HIV and default was 2.3 times greater in HIV+ [crude OR=2.31, 95%CI (1.51-3.53)]. Other covariates did not influence the final logistic regression model. Among 316 HIV+ cases, 164 were found in the ARV database, and 83 (51.9%) were on HAART prior to TB diagnosis. The odds of death were 2.6 times greater [OR=2.61, 95%CI (1.24-5.50)] and for default, 2.8 times greater [OR=2.83, 95%CI (1.03-7.95)] for HIV+ patients who were on HAART compared to HIV+, non-HAART. Patients previously on HAART had a median time of use of 38.3 months; 33 months to the outcome cure, 48 months to default and 50.5 months to death. Median time to start ARV therapy in ARV-naïve patients was 3 months following the TB episode.

Conclusions: In our cohort we found a high proportion of HIV+ (28.6%), from whom 83 (26.3%) were already on HAART. HIV+ subjects were at higher risk of death and treatment default. Our findings emphasize the need of TB chemoprophylaxis among HIV+.