

Factors Associated with Death during Tuberculosis Treatment of Patients Co-Infected with HIV at a Tertiary Care Setting in Cameroon: An 8-Year Hospital-Based Retrospective Cohort Study (2006-2013)

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Abstract : Background: Contributors to fatal outcomes in patients undergoing tuberculosis (TB) treatment in the setting of HIV co-infection are poorly characterized, especially in sub-Saharan Africa. Our study's aim was to assess factors associated with death in TB/HIV co-infected patients during the first 6 months their TB treatment. Methods: We conducted a tertiary-care hospital-based retrospective cohort study from January 2006 to December 2013 at the Yaoundé Central Hospital, Cameroon. We reviewed medical records to identify hospitalized co-infected TB/HIV patients aged 15 years and older. Death was defined as any death occurring during TB treatment, as per the World Health Organization's recommendations. Logistic regression analysis identified factors associated with death. Magnitudes of associations were expressed by adjusted odds ratio (aOR) with 95% confidence interval. A p value < 0.05 was considered statistically significant. Results: The 337 patients enrolled had a mean age of 39.3 (+/- 10.3) years and more (54.3%) were women. TB treatment outcomes included: treatment success in 60.8% (n=205), death in 29.4% (n=99), not evaluated in 5.3% (n=18), loss to follow-up in 5.3% (n=14), and failure in 0.3% (n=1) . After exclusion of patients lost to follow-up and not evaluated, death in TB/HIV co-infected patients during TB treatment was associated with: a TB diagnosis made before national implementation of guidelines regarding initiation of antiretroviral therapy (aOR = 2.50 [1.31-4.78]; p = 0.006), the presence of other AIDS-defining infections (aOR = 2.73 [1.27-5.86]; p = 0.010), non-AIDS comorbidities (aOR = 3.35 [1.37-8.21]; p = 0.008), not receiving co-trimoxazole prophylaxis (aOR = 3.61 [1.71-7.63]; p = 0.001), not receiving antiretroviral therapy (aOR = 2.45 [1.18-5.08]; p = 0.016), and CD4 cell counts < 50 cells/mm³ (aOR = 16.43 [1.05-258.04]; p = 0.047). Conclusions: The success rate of anti-tuberculosis treatment among hospitalized TB/HIV co-infected patients in our setting is low. Mortality in the first 6 months of treatment was high and strongly associated with specific clinical factors including states of greater immunosuppression, highlighting the urgent need for targeted interventions, including provision of anti-retroviral therapy and co-trimoxazole prophylaxis in order to enhance patient outcomes.

Keywords : TB/HIV co-infection, death, treatment outcomes, factors

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