Characteristics of patients co-infected with HIV at the time of inpatient tuberculosis treatment initiation in Yaoundé, Cameroon: A tertiary care hospital-based cross-sectional study

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**Background:** Knowledge of the characteristics of patients co-infected with tuberculosis (TB) and human immunodeficiency virus (HIV) when TB treatment is initiated would allow clinicians to improve care and help policy-makers develop relevant and realistic guidelines. The aim of this study was to describe socio-demographic, clinical and laboratory characteristics of TB/HIV co-infected patients starting inpatient TB treatment in Yaoundé, Cameroon.

**Methods:** We conducted a retrospective cross-sectional study, collecting data from medical records of HIV-infected patients with TB, aged 15 years old or more, hospitalized in the Infectious Disease Unit of the Yaoundé Central Hospital, Cameroon from January 1, 2006 to June 30, 2013.

**Results:** The mean age of 337 patients meeting study inclusion criteria was 39.3 years. More than half were female (53.4%, n=180). Most (89.3%, n=301) resided in urban areas, 44.2% (n=149) had a secondary education and slightly less than half (46.0%, n=155) were married. The majority was receiving co-trimoxazole prophylaxis (79.5%, n=268) and two thirds were taking antiretroviral therapy (67.4%, n=227). The mean duration of known HIV infection before TB treatment was 8.4 months. Most (88.1%, n=297) had newly diagnosed TB rather than relapsed disease. Smear-positive pulmonary TB was documented in a third, (35.3%, n=119). Laboratory data revealed a median white blood cell count 5,100 cells/mm³ (IQR 3,300-7,990 cells/mm³); a median hemoglobin level of 8 g/dl (IQR 7-10 g/dl) and a median CD4 cell count 102 cells/mm³ (IQR 33-178 cells/mm³). Sex differences in our study included older age in the men (p<0.001), more of whom were married (p<0.001) and had achieved a higher level of education (p=0.042). Men had fewer diagnoses of smear-positive pulmonary TB (p=0.020). They weighed more than the women (p=0.001) and had higher hemoglobin levels (p=0.003).

**Conclusions:** Suboptimal adherence to WHO treatment recommendations in our Cameroonian study reinforces the importance of prescribing co-trimoxazole in HIV infection and ART for all TB/HIV co-infected persons. We urge that Ministries of Health continue implementing and disseminating guidelines for management of TB/HIV co-infected patients and we call for measures ensuring that healthcare facilities' stocks of ART and co-trimoxazole are sufficient to meet the need for both.

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