

Abstract: P_110*Coinfections in HIV infected children***Tuberculosis in HIV-infected children in Europe, Thailand and Brazil: paediatric TB:HIV EuroCoord study**

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Background: Tuberculosis (TB) is the major cause of mortality and morbidity in HIV-infected children. Diagnosis is difficult and successful TB-treatment outcomes vary across settings from 69% to 88%. Contemporary data are scarce in high and middle-income settings.

Methods: Fifteen cohorts/sites participated. HIV-infected children aged <16 years diagnosed with TB in 2011-2013 were included and followed-up for 2 years. Treatment

outcomes were categorised as favourable: cured and treatment completed; or unfavourable: treatment not completed, recurrence, death, and not known. TB incidence per 100,000 person-years (PY) was calculated. Characteristics were compared by TB outcome using Fisher's exact test for categorical variables and Wilcoxon's rank-sum test for continuous variables. Adjusted analyses were not possible due to the small sample size.

Results: Of 4,265 children, 127 (3%) were diagnosed with TB: 1%, 3%, 5% and 8% in Western Europe, Eastern Europe (EE), Thailand and Brazil respectively. Estimated TB incidence rates were 239, 982, 1633 and 2551 per 100,000PY respectively. Median age at TB diagnosis was 6.8 (IQR 3.0-11.5) years. 63 (52%) had advanced/severe WHO immunological stage. Children in EE were younger ($p=0.005$), in Thailand they were more immunocompromised (none/mild vs advanced/severe WHO immunological stage; $p<0.0001$), and in Brazil more children reached HIV CDC stage C prior to TB diagnosis ($p=0.0003$). 48 (38%) diagnoses were bacteriologically-confirmed.

TB preventive treatment was used in 23% (23/102) of those diagnosed with TB after HIV. Of 67 children not on ART, 93% initiated/restarted ART at a median 1.8 (0.8, 3.9) months after TB diagnosis; 94% achieved VL<400 c/ml within 12 months. Of 60 children on ART, TB was diagnosed at median 29.7 (IQR 6.1-55.0) months after ART initiation, and 51% had VL \leq 400 c/ml at TB diagnosis. Seven participants had TB-IRIS at a median of 2.3 (IQR 1.1-8.8) months after ART initiation.

Nine children had drug-resistant TB, 8 from EE. 10% (12/118) of children with suspected drug-sensitive TB were treated without rifamycins. Streptomycin was used in 25 children (24 from EE, including 21 with first-time TB). Addition of 1-2 second-line anti-TB drugs without suspected resistance was reported in 24 (19%) children, most frequently in EE ($p=0.0093$). Median treatment duration for drug-sensitive TB was 9.5 (IQR 7.8-12.4) months; children in Brazil received the shortest treatment ($p=0.0013$). 11 (9%) children discontinued any TB drug for toxicity; only one child experienced grade 3 ALT/AST elevation.

Eleven children had unfavourable TB outcomes (4 died, 5 did not complete treatment, 1 recurrent TB, 1 unknown outcome). In unadjusted analysis, children from Brazil, not virologically suppressed on ART and with a previous CDC stage C event had a significantly