

Prevalence, Risk Factors and Clinical Outcomes Associated with Delayed HIV diagnosis in Children with Tuberculosis Co-Infection in Cape Town, South Africa: A Retrospective Cohort Study

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Background: South African National HIV management guidelines recommends an early diagnosis of HIV, especially in children. Tuberculosis (TB) is a leading cause of co-morbidity in HIV-infected children and early initiation of antiretroviral therapy (ART) has demonstrated benefits to reduce morbidity.

Aims: The study aimed to describe clinical presentation and outcome of TB/HIV co-infected children managed at Tygerberg Hospital (TBH), Western Cape Province.

Methods: A retrospective cohort study conducted in children (<13 years) managed with both TB and HIV at TBH during 2012; data were collected from routine medical and laboratory records, as well as electronic TB treatment registers. Children were classified as co-diagnosed with TB/HIV if HIV diagnosis occurred within 7 days prior to TB diagnosis and TB symptoms were recorded at the time of presentation. Descriptive and univariate analysis were performed.

Results: Of 91 children managed with TB/HIV co-infection during 2012, 38 (42%) were diagnosed simultaneously with TB and HIV. Of 53 children diagnosed with HIV before TB, 8/20 (40%) not receiving ART were eligible, and 9/33 (27%) who did receive ART reported treatment interruption. Co-diagnosis with TB/HIV were more likely if maternal HIV status were not known at birth (OR 3.2,95%CI 1.12-8.18; $p=0.02$) and if children were older than one year at age of HIV diagnosis (OR 3.28,95%CI 1.16-9.25, $p=0.02$). Odds of death were higher in the co-diagnosed group (OR 7.88;95%CI 0.82-75.54, p -value 0.03).

Conclusion: TB diagnosis provides an important opportunity to test children for HIV. Missed opportunities for HIV prevention, earlier diagnosis and ART initiation were identified.

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