

Prevalence of HIV type 1 infection associated clinical features and mortality among hospitalized children in Dar es Salaam, Tanzania.

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Abstract

The aim of this study was to determine the prevalence of HIV-1 infection, the clinical spectrum of HIV-1-associated conditions and HIV-1-associated mortality among children hospitalized in the medical paediatric wards at Muhimbili Medical Centre (MMC), Dar es Salaam, Tanzania. All children admitted to the medical paediatric wards of MMC between August 1995 and January 1996 were eligible for the study. Testing for HIV antibodies was done using 2 consecutive enzyme linked immunosorbent assays (ELISAs). ELISA-reactive samples from children aged 18 months and below were further tested by a recently developed heat-denatured p24 antigen assay. The prevalence of HIV-1 infection among the 2015 children studied was 19.2%. When present for 14 days or more, fever, cough, diarrhoea, ear discharge, oral ulcers and skin rash were all significantly more common in HIV-1-infected than in HIV-uninfected children ($p < 0.001$). In the multivariate analysis cough, ear discharge, oropharyngeal ulcers and skin rash were found to be the most important symptoms. Clinical signs found to be significantly associated with HIV-1 infection in the univariate analysis were wasting, stunting, hair changes, oral thrush, oropharyngeal ulcers, lymphadenopathy, lung consolidation and lung crepitations ($p < 0.001$). In the multivariate analysis, oral thrush, lung crepitations, cervical lymphadenopathy, wasting and inguinal lymphadenopathy were found to be the most important signs. The 3 most common diagnoses in HIV-1-infected children were acute respiratory infection (ARI) (39.4%), malnutrition (38.1%) and tuberculosis (19.3%), while in HIV-uninfected children they were malaria (47.0%), ARI (25.0%) and malnutrition (16.1%). The mortality rate was 21.4% in HIV-1-infected children and 8.4% in HIV-uninfected children ($p < 0.001$). In conclusion, the prevalence of HIV-1 infection among hospitalized children at the main hospital in Dar es Salaam was high and associated with high mortality. Many symptoms and signs are indicative of HIV-1 infection, but appropriate laboratory testing is required for diagnosis.