

## **Efficacy of Antiretroviral Therapy Program in Children in India: Prognostic Factors and Survival Analysis**

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### **Abstract**

The objective of this article is to study the survival pattern and the prognostic factors for HIV-infected children on antiretroviral therapy (ART) for two and half years at the Government Hospital of Thoracic Medicine, Tambaram, Chennai, India. We studied 295 children who were initiated on ART from 1 April 2004 to 30 September 2006 at a large, public tertiary care facility in Chennai, India. Weight for age Z-score was calculated. Survival curves and Cox proportional hazard models were used to identify risk factors for mortality. The mean and median follow up was 11 and 10 months, respectively. The cumulative survival probability at 6, 12, 18, 24 and 30 months was 93, 90, 89.7, 89.7 and 89.7%, respectively. Of the children who died, about 50% died within the first month. Nearly 6% of the children had adherence less than 95%. The children who had a baseline CD4 percent less than or equal to 14% had significantly ( $p < 0.05$ ) higher mortality as compared to children who had 20% or more. The children who had negative or no change in weight for age Z-score and hemoglobin had 18.9 (3.7–95.7) times significantly higher mortality as compared to children who had positive change in both variables ( $p < 0.001$ ). The sensitivity, specificity and likelihood ratio of the positive test for negative change or no change in HB was 65%, 85% and 4.3, respectively. Similarly, these were 80%, 73% and 3% for negative or no change in Absolute Lymphocyte Count (ALC). These findings indicate the feasibility and effectiveness of implementing an ART program in a large government hospital in India. Simple nutritional variable hemoglobin and immunologic variable ALC could be used to monitor the progression of disease in children.