A RETROSPECTIVE STUDY INVESTIGATING MALNUTRITION IN HIV POSITIVE CHILDREN IN SIERRA LEONE


Aims To determine the prevalence of acute malnutrition, stunting and underweight in HIV infected children in an urban outpatient clinic in Sierra Leone, to establish risk factors predisposing to malnutrition, determine the outcome of these patients after 18 months follow-up, and make recommendations to minimise malnutrition in this population.

Methods A retrospective study of 409 HIV positive paediatric patients managed in an urban hospital in Sierra Leone. Data was gathered from notes at enrolment, and at 3, 6, 9, 12, 15 and 18 months after enrolment.

Results Between enrolment and 18 months the malnutrition prevalence improved significantly; acute malnutrition prevalence 54.0% to 7.1%, stunting 53.9% to 8.0%, and underweight 62.6% to 28.9%. Logistic regression analysis showed a significant association between chronic diarrhoea (OR 4.1, CI: 2.48 to 6.8), cough (OR 3.0, CI: 2.19 to 4.09), tuberculosis (OR 1.4, CI: 1.04 to 1.8), oral thrush (OR 4.1, CI: 2.44 to 6.22), recurrent infection (OR 2.7, CI: 1.43 to 5.09), advanced stage (OR 7.4, CI: 1.05 to 80.1) and malnutrition. Protective factors against malnutrition included higher CD4 counts (CD4 >500 OR 0.27, CI: 0.13 to 0.60), female sex (OR 0.45, CI: 0.35 to 0.58), and ARVs (OR 0.18, CI: 0.11 to 0.30). Multivitamin supplementation was not protective. At 18 months 23.0% were lost to follow-up, 5.7% died. A higher prevalence of malnutrition was observed in the lost to follow-up group (acute malnutrition 78.3% vs 54.0%, underweight 70.4% vs 60.6%, stunting 65.8% vs 53.9%) and the died group (stunting 66.6% vs 53.9%, underweight 77.8% vs 60.6%).

Conclusion Most patients were acutely and chronically malnourished at presentation. A significant association was observed between opportunistic infection, advanced stage and malnutrition. Malnutrition at presentation was associated with increased mortality. Initiation of ARVs, antimicrobials and RUTF improved malnutrition prevalence. Focusing on antenatal screening to reduce transmission and earlier intervention with ARVs, antimicrobials and nutritional supplementation would improve outcomes and mortality rates. Since this study, the Ebola epidemic has diverted already limited resources away from existing public health programmes, outcomes are now likely to be even worse than at the time of data collection.