HIV-INFECTED CHILDREN WITH SEVERE ACUTE MALNUTRITION
EARLY VERSUS DELAYED ART INITIATION

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ABSTRACT

Background: Poor access to HIV diagnostic testing and ART services for children from low and middle-income countries, frequently results in malnutrition at initial presentation. Despite ART initiation, HIV positive children with malnutrition have a higher mortality and delayed immunologic recovery. The optimal timing of ART initiation in children with malnutrition has not been established.

Methods: Eighty-two HIV infected children with severe acute malnutrition (SAM) admitted to King Edward VIII Hospital between July 2012 and December 2015 were enrolled. Patients were randomized to initiate ART within 14 days from admission (Early arm) or delay ART initiation until nutritional recovery and more than 14 days from admission (Delayed arm). All patients received a standardized treatment and feeding protocol and were evaluated at 4, 8, 12, 24 and 48 weeks.

Findings: The average age of the patients at baseline was 23.3 months (SD 7.9; range 1.6–129 months). The mean time from admission to ART initiation was 5.6 days (SD 4.4) in the early arm and 23 days (SD 5.8) in the delayed arm (p=0.001). There was no significant difference in mortality (p=0.621), virologic response (p=0.527) and anthropometric response (p=0.566) between the two groups at 48 weeks. However the rates of change in CD4, viral load, WAZ and HAZ scores occurred earlier and favored the delayed arm.

Conclusions: HIV-infected children with SAM and initiated on ART demonstrated significant improvements in CD4 counts and anthropometric parameters, together with significant viral load reduction compared to baseline. In this randomized controlled trial comparing early versus delayed ART initiation in HIV infected children admitted with SAM, although the differences in CD4 count, viral suppression and anthropometric response at 48 weeks was not significant, the rates of change in CD4, viral load, WAZ and HAZ scores occurred earlier and favored the delayed arm. Based on the results of this study, we recommend that ART initiation in children with SAM should be delayed for at least two weeks after starting nutritional rehabilitation.

Conflict of Interest: The authors declare no conflict of interest.

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