

Abstract category: B50 Nutrition

Title: Effectiveness of outpatient nutritional rehabilitation based on ready-to-use food in Senegalese children and adolescents infected with HIV: The multicenter SNAC's Study.

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Text: Background: Severe acute (SAM) and moderate acute (MAM) malnutrition are common and associated with mortality in HIV-infected children and adolescents, even when on antiretroviral treatment (ART). Ready-to-use food (RUF) is effective and widely used in outpatient nutritional rehabilitation of children < 5 years with SAM. However, the effectiveness of such nutritional rehabilitation in older children and adolescents is unknown. The SNAC's Study aims to assess effectiveness of RUF protocols in 12 HIV clinics in Senegal.

Methods: RUF, namely Plumpy Nut™ and Plumpy Sup™, were provided every 2 weeks and prescribed by weight to SAM and MAM children, respectively, aged 6 months to 19 years. Successful nutritional rehabilitation (SNR) was defined as a z-score for body mass index-for-age > -1.5. Laboratory monitoring was performed at enrollment and at last visit. Multiple logistic regression was used to assess factors associated to SNR.

Results: Overall, 185 children were enrolled, 79 SAM and 106 MAM (Table 1). Most patients, 70%, experienced SNR, 16% failed to gain weight and/or to consume RUF and were discontinued, 7% defaulted, 2% died and 5% were still under follow-up. Median time to achieve SNR was 97 days (IQR: 58-167) in MAM and 153 days (89-266) in SAM children (P=0.003). SNR was more likely in patients with MAM rather than SAM (adjusted odds ratio = 3.7, 95% CI: 1.6-8.3), enrolled in a regional clinic (3.0, 1.2-7.4), and who were younger (5-10 versus 10-19 years of age: 3.0, 1.1-8.5). There was a trend towards an association between the virologic suppression and SNR in children on ART, 2.5 (1.0-6.2).

Table 1: Characteristics of HIV-infected undernourished children at enrollment in the SNAC's Study, Senegal.

Characteristics	MAM (n=106)	SAM (n=79)	All (n=185)	P-value
Girls, %	37	42	39	0.49
Age, years, median (IQR)	11.0 (7.5- 13.4)	12.5 (9.4- 14.7)	11.7 (8.1- 14.3)	0.05
Followed-up in Dakar, %	48	38	44	0.17
ART, %	85	90	87	0.32
Viral load < 300 cp/ml, %	56	39	46	0.05

[Table 1]

Conclusions: RUF therapies are feasible and effective in undernourished HIV-infected children and adolescents, including in a decentralized setting. The results suggest that nutritional support should be initiated at an early stage of malnutrition and advocate for the integration of RUF therapies in the global HIV care of children.

Country of
research: Senegal

Key Population: Infants and children (0 -14), People living with HIV

Submitted to
HIV/Viral Hepatitis No
Pre-Conference:

Ethical research
declaration: Yes