Original Research Article

Vulnerability factors for malnutrition among people living with HIV under antiretroviral treatment in an outpatient clinic: Kinshasa, Democratic Republic of Congo

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A B S T R A C T
Background: Significant progress has been made in the fight against HIV/AIDS across the world. However, in sub-Saharan countries, there remain numerous obstacles to achieving treatment goals. The aim of this study was to identify factors underlying vulnerability to malnutrition among people living with HIV (PLWHIV) under antiretroviral treatment (ART) in resource-limited settings.

Methods: A cross-sectional study was carried out in May 2010 in Kinshasa, the capital of the Democratic Republic of Congo. Baseline characteristics of PLWHIV were analyzed, and statistical analyses were performed in order to compare proportions of low weight, low mid-upper arm circumference, and low body mass index. Further analyses were performed to compare means of anthropometric characteristics according to sociodemographic, socioeconomic, and clinical characteristics. Multiple regression analyses were used to assess vulnerability determinants for malnutrition following adjustment.

Results: We identified specific sociodemographic characteristics, socioeconomic level and clinical characteristics (i.e. autonomous activity, appetite, asthenia level, and HIV clinical stage) that were significantly associated with malnutrition in PLWHIV.

Conclusions: Determining factors underlying vulnerability to malnutrition may be helpful to health providers in poor income settings for more effectively target patient interventions.

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1. Background

Since the implementation of effective therapeutic combinations, the Joint United Nations Programme on HIV/AIDS (UNAIDS) reported that significant progress has been made regarding the worldwide response to AIDS [1]. New HIV infections are falling, fewer people are dying of AIDS-related causes, and more people with HIV are living longer. However, in developing countries, especially in African sub-Saharan countries, there remain numerous challenges that need to be tackled in order to achieve maximal virologic suppression and zero new HIV infections, which are worldwide treatment goals.

Although significant progress has been made in HIV care, many therapy failures have also been observed. Walmsley [2] reported that in a large number of cases therapies failed as a result of resistance, which is primarily driven by sub-optimal adherence. A number of common reasons are given for poor adherence, including adverse effects, dietary restrictions, as well as difficulties taking antiretroviral drug regimens due to excessive pill burden and/or dosing frequency (e.g. missing or forgetting to take doses). However, for many patients, drug toxicity is the major barrier to full adherence [2].

A decade after the start of antiretroviral therapy (ART) in the Democratic Republic of Congo (DRC), several governmental programs and non-governmental organizations have been dedicated to the fight against HIV and have followed many people living with HIV (PLWHIV). However, these programs have faced challenges within the poor income setting of the DRC, such as drug availability for all patients, stock shortages, frequent inadequacy of laboratory materials, and the lack of efficacious therapeutic combinations to combat resistance. Moreover, there are commonly delayed starts for appropriate treatment measures, barriers to assessing biological parameters at follow-up, difficulties in maintaining adherence to treatment, and limited nutritional support [3]. Importantly, it has been reported that in sub-Saharan Africa a significant proportion of patients who require ART are already

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