Epidemiology of malnutrition among HIV adults patients in one tertiary hospital in Rwanda – BUTH

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Background

Literatures on prevalence and factors associated with malnutrition among peoples living with HIV/AIDS are limited in Rwanda and not well documented. The proper implementation of nutritional support and its integration with the routine highly active antiretroviral therapy package demands a clear picture of the magnitude and associated factors of malnutrition. The objective of this study is, therefore, to assess the prevalence of malnutrition and its associated factors among people living with HIV/AIDS in one tertiary hospital in Rwanda – Butare University Teaching Hospital (BUTH).

Methods

Institution based cross sectional study was conducted at BUTH including adult HIV patients who were on highly active anti-retroviral therapy. Interview administered questionnaires were used to collect data on socio demographic factors. Besides, HIV related clinical information were extracted from anti retro viral therapy database and clinical charts. The nutritional status of the patients was determined by Body Mass Index (BMI) where BMI < 18.5kg/m² was defined as malnutrition according to World Health Organization (WHO) and Subjective Global Assessment (SGA) rating. Binary logistic regression was used to assess association between different risk factors and malnutrition. Confidence interval of 95% was considered to see the precision of the study and the level of significance was taken at $\alpha < 0.05$.

Results

A total of 240 patients were included in the analysis. The overall prevalence of undernutrition was found to be 28.8% by BMI calculation and 33.3% by SGA ratingand obesity was 5.4%. Male gender, low educational level, low socio-economic status , being widowed (COR= 1.87, 95% CI 1.02-3.43) unemployment, WHO clinical stage four (COR = 12.57, 95% CI: 2.39− 65.91), CD4 cell count less than 200 cells/mm³ (aOR= 10.42, 95% CI 0.70-154.59), viral load above 20 000 copies/ml (aOR=2.48, 95% CI 0.94-6.56), history of multiple previous opportunistic infections

(aOR=3.15, 95% CI 0.46-21.45) were significantly associated with under nutrition. Female gender (COR 2.11, 95% CI 0.45-0.9.8), high educational level (COR 2.30, 95% CI 0.34-15.56) and working in private sector (COR 38, 95% CI 2.81-512.91) were associated with increasing risk of obesity.

Conclusion

The prevalence of undernutrition was found to be high (28.8% by BMI calculation and 33.3% by SGA rating) and obesity was as well found in some patients (n=13, 5.4%).

Gender, educational level, employment status, poverty status, residential area, WHO clinical staging, CD4 cell count, viral load, number of previous opportunistic infections and gastrointestinal symptoms were found to be important risk factors for undernutrition among People Living with HIV/AIDS. From this study it has been learnt that nutritional programs should be an integral part of HIV/AIDS continuum of care.ee recommend comprehensive nutritional assessment and care with special emphasis on patients with CD4 count of less than 200/μL and/or those with advanced stages of the disease as part of their HAART care.

Keywords: Prevalence, Malnutrition, HIV, Rwanda, And Sub-Saharan Africa

Short Bio: MUSHURU Evariste, MD, MMED is a consultant physician at Butare university teaching hospital and a clinical lecture at University of Rwanda over the last 3 years. He has research interest in clinical nutrition particularly in low-income settings, and has published 3 papers among which one was about malnutrition among sepsis patients.