

Factors Associated with Overweight and Obesity among Recipients of Antiretroviral Therapy at HIV Clinics in Botswana

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Abstract : Background: Factors associated with overweight and obesity among antiretroviral therapy (ART) recipients have not been sufficiently studied in Botswana. We aimed to study (i) the prevalence and trends in overweight/obesity by duration of exposure to ART among recipients, (ii) changes in body mass index (BMI) categories among recipients before ART initiation (BMI-1) and after ART initiation (BMI-2), (iii) associations between ART and overweight/obesity and (iv) factors associated with BMI changes among ART recipients. Methods: A 12 years retrospective record-based review was conducted. Factors potentially associated with BMI change among patients after at least three years of ART exposure were examined using multiple regression model. Adjusted odds ratios (AOR) and their 95% confidence intervals (CIs) were computed. ART regimens, duration of exposure to ART, and recipients' demographic and biomedical characteristics including the presence or absence of diabetes mellitus related comorbidities (DRC) were investigated as potential factors associated with overweight/obesity. Results: Twenty-nine percent of recipients were overweight, 16.6% had obesity of whom 2.4% were morbidly-obese at the last clinic visit. Overweight/obesity recipients were more likely to be female, to have DRC and less likely to have nadir CD4 count or CD4 count between 201 - 249 cells/mm³. Neither the first-line nor the second-, third-line ART regimens predicted overweight/obesity more than the other and neither did the duration of exposure to ART. No significant linear trends were observed in the prevalence of overweight/obesity by the duration of exposure to ART. Conclusions: These results indicate that overweight/obesity seen among ART recipients is not directly induced by ART. ART used CD4 and/or DRC pathway to induce overweight/obesity seen among recipients; suggesting that, weight gain documented herein is likely a reflection of improved health status that mirrors trends in the general population or a DRC related effect. Weight management programs may be important components of HIV care.

Keywords : overweight/obesity, recipients of antiretroviral therapy, HIV/AIDS, Botswana

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