Summary / Zusammenfassung
Background: Increasing obesity rates have been reported in HIV-positive (HIV+) persons. Body mass index (BMI) increase is typically recorded after start of antiretroviral therapy (ART), but the contributing factors have not been fully evaluated.
Methods: We describe longitudinal BMI trends in Swiss HIV Cohort Study participants. We investigate the effects of demographics, HIV-related factors and individual ART regimens on BMI change in 1601 participants with BMI data available before and after one and four years after start of a first ART regimen.
Results: Obesity rates in the SHCS have been increasing every year since highly active ART became available. Median BMI increase was 0.63 kg/m² during year one and 0.11 kg/m²/year during years 2-4 of ART. In the final multivariable model, BMI gain in year 1 was associated with CD4 nadir <100 and 101-199 cells/µL (BMI gain 1.6 kg/m² and 0.46 kg/m², respectively, p<0.001), advancing age (0.15 kg/m² per 10 years, p=0.002) and Asian ethnicity (-0.79 kg/m², p<0.001). BMI gain during years 2-4 was associated with CD4 nadir <100 cells/µL (0.37 kg/m²/year, p=0.004) and Black ethnicity (0.28 kg/m²/year, p<0.001). Individual ART regimens did not contribute differently to BMI change, except for some zidovudine-containing ART regimens years 2-4.
Conclusions: BMI increase after ART start is a biphasic process; most of the BMI gain occurs in year 1 of ART and is influenced most by CD4 nadir. BMI gain in years 2-4 of ART tends to be modest, except in Blacks. The effect of individual ART regimens on BMI change was limited in our dataset.

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