Relationship between Bone Composition and Fat Indexes in HIV-Infected Patients. Anna Bonjoch1, Carla Estany1, Núria Pérez-Álvarez2, Joaquim Rosales3, Patricia Echeverria, Bonaventura Clotet1,4, Eugènia Negredo1,5

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ABSTRACT

Background. Body composition among the HIV-infected patients is influenced by several factors including antiretrovirals and the virus itself. This study aims to determine the relations between bone and fat distribution of this population.

Methods. We collected T and Z scores and bone mineral density (BMD) from lumbar spine (L-1,4,5) and femoral neck, and the overall BMD by dual energy x-ray absorptiometry (DXA) from our cohort of HIV-infected people. The following fat indexes were included as independent variables: Fat mass index (BMI), Fat mass ratio (FMR), Total percentage of left leg fat/total fat, of trunk fat/total fat, of left fat and FMI. Linear regression analyses were performed.

Results. 1,480 subjects were included, 75% were male and the median (IQR) of age was 45.2 (40.5-55) in men and 46.3 (41.5-52) in women. Significant results from the univariate model were maintained in the multivariate analysis. Results are shown at Table 1 and Figure 1. The most consistent correlation with FMI was found for lumbar BMD in adults and showed was FMI in women (that is, 100% where negative relation between total BMD and percentage of left leg fat/BMI (p<0.001, B=-0.386) and BMD of femoral neck and leg fat/BMI. Linear regression analyses were performed. The last available DXA was included in the analysis (March 2000 to December 2016).

RESULTS

This study included 1,480 persons, 75% were male and the median (IQR) of age at the last DXA scan was 45.6 (45.53) years old. 25% were female and the median (IQR) of age at the last DXA scan was 46.9 (41.52) years old. Sample distribution was explained at Table 1.

CONCLUSIONS

Percentage of left leg fat/BMI exhibit the most consistent correlation with bone index in both genders. The index that more positive correlation showed was FMI (women and men). The most consistent correlation with bone index in both genders. The index that more positive correlation showed was FMI (women and men).

REFERENCES


Table 2. Multivariable models for assessed bone measure by gender: BMI = Body Mass Index, g = grams.