



6th IAS CONFERENCE
ON HIV PATHOGENESIS,
TREATMENT AND PREVENTION
17-20 JULY 2011 - ROME, ITALY



Abstract

[Close](#)
[Sign In](#)
[Back to the session](#)

MOAB0102 - Oral Abstract

Coronary artery calcification is associated with femoral but not with lumbar spine mineral density

Presented by Giovanni Guaraldi (Italy).

A. Bellasi¹, S. Zona², G. Orlando², F. Carli², S. Cocchi², G. Ligabue³, V. Rochira⁴, P. Bagni², P. Raggi⁵, G. Guaraldi²

¹S. Orsola-Malpighi Hospital, Nephrology, Dialysis and Hypertension Department, Bologna, Italy, ²University of Modena and Reggio Emilia, Infectious Diseases Clinic, Modena, Italy, ³University of Modena and Reggio Emilia, Radiology Unit, Modena, Italy, ⁴University of Modena and Reggio Emilia, Division of Endocrinology, Modena, Italy, ⁵Emory University, Division of Cardiology, Atlanta, United States

Background: Coronary artery calcium (CAC) is associated with an increased risk of cardiovascular disease (CVD). Some epidemiological evidence suggests the existence of a link between bone demineralization and CAC. We tested the association between CAC and bone mineral density (BMD) in a large cohort of HIV infected patients.

Materials: We assessed simultaneously CAC as well as lumbar and femoral BMD in a large cohort of 681 consecutive HIV-infected patients by means of cardiac CT and DEXA. Logistic regression analysis was used to determine the association between low femoral and lumbar spine BMD (defined as BMD below the 25th percentile of the study cohort distribution) and extensive CAC (defined as CAC > 100 Agatston Units)

Results: Patients with CAC>100 were older, more likely to be men, diabetic and overweight. In contrast, a greater creatinine clearance and a lower CV risk profile was noted among patients with CAC< 100. On univariable analyses, a trend toward low femoral (14.26 vs 22.6, p=0.10) but not lumbar spine BMD (15 vs 16, p=0.95) was noted. Adjustments for several factors typically associated with either CAC or BMD revealed a significant association between CAC and femoral but not lumbar spine BMD. In fact, patients with extensive CAC had a 2-fold greater risk of having a low femoral BMD (OR: 2.24; 95%CI: 1.08-4.65; p=0.03) after adjustment for age, sex, diabetes, BMI, Framingham risk score, estimated glomerular filtration rate, protease inhibitor exposure and CD4 nadir.

Conclusion: This study shows that CAC is independently associated with low BMD in HIV infected patients. Further studies are needed to elucidate the mechanisms that link bone demineralization and CAC accrual and whether therapies that impact BMD might also attenuate CAC progression in HIV infected patients.

[Back to the Programme-at-a-Glance](#)

[Contact Us](#) | [Site map](#)

© 2011 International AIDS Society