Bone Problems Among Women, But Not Men, With HIV and Hepatitis

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HIV-positive women who are also infected with hepatitis B virus (HBV) or hepatitis C virus (HCV) have lower bone density than positive women not infected with HBV or HCV, according to a study published online September 23 in *AIDS*. Among men in the study, however, no connection between HIV, viral hepatitis and bone mineral loss was documented.

As increasing numbers of people with HIV are now living well into their 50s and 60s, diseases typically associated with aging have become a greater concern. Low bone mineral density can increase the risk of serious fractures, which in turn increase the risk of further illness and death.

Previous research has documented that HIV-positive men appear to lose bone mineral at a more rapid rate, at a younger age, compared with HIV-negative men. No studies, however, have looked specifically at this condition in people coinfected with HIV and HCV or HBV—two additional viral infections that, for unknown reasons, have been linked to bone mineral depletion.

To determine the potential influence of coinfection on bone mineral density, Vincent Lo Re, MD, MSCE, from the University of Pennsylvania School of Medicine in Philadelphia, and his colleagues conducted bone scans in 1,237 people with HIV in Italy. Among this group, 624 were also infected with viral hepatitis—92 percent with HCV, 14 percent with HBV and 5 percent with both HCV and HBV. The average age overall was 43.

Lo Re's team found that coinfected women were more likely to have more pronounced bone mineral loss in their spines than women infected only with HIV. Among men, however, no differences between HIV-monoinfected and HIV/viral hepatitis-coinfected patients was found.

When the team looked at bone density in the upper thighbone, coinfected women once again had weaker bones than women with just HIV. This difference, however, was not statistically significant, meaning that it could have occurred by chance.

When looking at low bone mineral density in both the spine and thighbone, coinfected women were more likely to have low bone density, and this time the result was statistically significant.

Other factors that likely contributed to reduced bone mineral density in this study included being older, being underweight, smoking and engaging in less physical activity.

The authors concede that because the study participants are all from the same country, Italy, the results may not be true for people in other countries. They are calling for future studies to examine the reasons why HIV and hepatitis coinfection might increase bone mineral loss and to determine whether this actually translates into higher fracture rates.
