

OSTEOSCOOP

News on current events in osteoporosis and rheumatology

Calcifications in the abdominal aorta predict fractures in men: MINOS Study

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Cardiovascular disease and osteoporotic fractures are two major public health problems. Cardiovascular disease and osteoporosis coexist in women: progression of aortic calcifications has been associated with faster bone loss. Low BMD has been shown to predict cardiovascular events and cardiovascular mortality, whereas the association between the extension of aortic calcifications and hip fracture risk is controversial. In contrast to these findings in women, few studies concern the relationship between osteoporosis and cardiovascular disease in men. Vascular calcifications have been associated with lower BMD in men, yet data on the association between cardiovascular disease and low BMD in men are discordant, despite the fact that low BMD in men has in some studies been shown to be associated with higher cardiovascular mortality. In order to assess the relation of the severity of aortic calcifications with BMD and the risk of fracture, a recent study [1] was performed in 781 men older than 50 y of age. During a 10-year follow-up, 66 men sustained incident clinical fractures. Calcifications in the abdominal aorta, expressed as an aortic calcification score (ACS), were assessed by a semiquantitative method. BMD was measured at the lumbar spine, hip, whole body, and distal forearm.

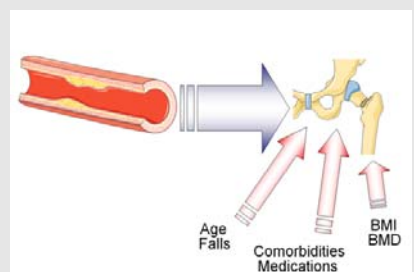
ACS >2 was associated with a 2-fold increase in the mortality risk after adjustment for age, weight, smoking, comorbidity, and medications. After adjustment for age, body mass index (BMI), smoking, and comorbidity, men in the highest quartile of ACS (>6) had lower BMD of distal forearm, ultradistal radius, and whole body than men in the lower quartiles. ACS predicted fractures when adjusted for age, BMI, age by BMI interaction, prevalent fractures, BMD, and history of two or more falls. Men with ACS >6 had a 2- to 3-fold increased risk of fracture after adjustment for confounding variables.

This long-term prospective study showed that elevated ACS (>6) is a robust and independent risk factor for incident fracture in older men regardless of age, BMI, BMD, prevalent fractures, history of two or more falls, comorbidities, and medications.

1. Szulc P et al. *J Bone Miner Res.* 2008;23:95–102.

Calcifications in the abdominal aorta predict fractures in men

A prospective study showed that elevated Aortic Calcification Score is a robust and independent risk factor for incident fracture in older men regardless of age, body mass index (BMI), bone mineral density (BMD), prevalent fractures, history of two or more falls, comorbidities, and medications.



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