

OSTEOSCOOP

News on current events in osteoporosis and rheumatology

Type 2 diabetes increases the risk of vertebral fractures

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Although patients with type 2 diabetes have an increased risk of hip fracture, risk of vertebral fracture (VF) and its association with BMD are still unclear. A recent study [1] examined Japanese type 2 diabetic patients (161 men >50 y and 137 postmenopausal women) and nondiabetic controls (76 and 622, respectively) by lateral spine radiography and DXA at the lumbar spine (L), femoral neck (FN), and radius (R).

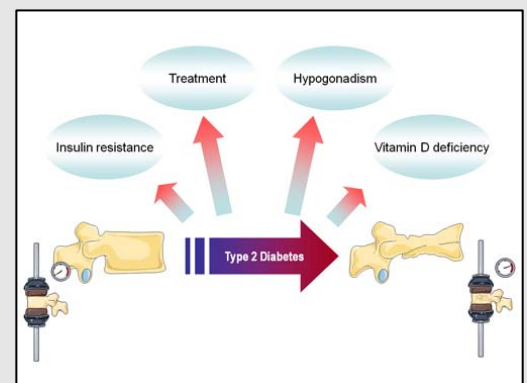
Logistic regression analysis adjusted for age, body mass index, and L-BMD showed that the presence of diabetes was an independent risk factor for prevalent vertebral fractures in women (OR = 1.86, P=0.019) and men (OR = 4.73, P<0.001). BMD at any site, however, was not significantly associated with the presence of prevalent vertebral fractures in diabetic patients, in contrast to the significant association in controls. Comparison of diabetic patients with and without vertebral fractures showed no significant differences in BMD values, bone markers, or diabetes status. Absolute L-, FN-, and R-BMD values for detecting prevalent vertebral fractures were higher in diabetic patients than controls, whereas their sensitivity and specificity were lower.

Type 2 diabetes patients may have an increased risk of vertebral fractures independent of BMD or diabetic complication status, suggesting that bone quality may define bone fragility in diabetes.

1. Yamamoto M et al. *J Bone Miner Res.* 2009;24:702–709.

Type 2 diabetes increases the risk of vertebral fractures

Type 2 diabetes is associated with an increased risk of vertebral fractures. Interestingly, the fracture risk did not correlate with bone mineral density, suggesting that bone quality is primarily impaired. Several factors may be involved in the impairment of bone quality: insulin resistance, hypogonadism, treatments such as thiazolidinediones, or vitamin D deficiency.



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