Review defines new fracture risk factors post-vertebroplasty

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Patients with low bone mineral density, low body mass index, and intradiscal cement leakage are at risk for new osteoporotic vertebral compression fractures after vertebroplasty, according to a review published in the June issue of the *Journal of Spinal Disorders & Techniques*.

(HealthDay)—Patients with low bone mineral density (BMD), low body mass index (BMI), and intradiscal cement leakage are at risk for new osteoporotic vertebral compression fractures (VCFs) after vertebroplasty, according to a review published in the June issue of the *Journal of Spinal Disorders & Techniques*.

Zitao Zhang, Ph.D., from The First Affiliated Hospital of Nanjing Medical University in China, and colleagues conducted a systematic review and meta-analysis to examine risk factors for new osteoporotic VCFs following vertebroplasty. Sixteen studies comprising 559 cases

and 1,736 controls were included in the analyses.

The researchers found that low BMD (standardized mean difference [SMD], ?0.73); low BMI (SMD, ?0.30); and intradiscal cement leakage (odds ratio [OR], 2.13) were significant risk factors for new VCFs. These were also significant risk factors for new VCFs adjacent to the treated VCF (SMD, ?0.43; SMD, ?0.52; and OR, 2.61, respectively). For new VCFs away from the original VCF, none of low BMD, low BMI, intradiscal cement leakage, cement volume, surgical approach, age, sex, or thoracolumbar junction fracture were significant risk factors. Dynamic characteristics were reported as risk factors for new VCFs in one study.

"The results of this meta-analysis strongly suggested that patients with low BMD, low BMI, and intradiscal cement leakage were at high risk for new VCFs after vertebroplasty, and risk-reduction options should be considered for such patients," the authors write.

More information: Abstract
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