

Minimally Invasive Technique May Offer Quick and Safe Pain Relief in Osteoporosis Patients with Low Back Pain

March 17 2008

An X-ray guided injection of synthetic bone cement into fractured pelvic bones may provide rapid and safe pain relief to osteoporosis patients with low back pain, according to a new multicenter pilot study.

Approximately 25 million Americans – predominantly women 50 years of age and older -- suffer from osteoporosis, the leading cause of sacral insufficiency fractures (SIFs). Bone fractures are common in individuals with osteoporosis due to decreased bone mineralization and mass. During the first year following an osteoporotic fracture, 75 percent of women do not receive adequate treatment due to a variety of reasons, including lack of clinical suspicion.

The research team, including spine and rehabilitation specialists from the Virginia Commonwealth University School of Medicine, Advanced Pain Management and Spine Specialists in Florida, and the OrthoCarolina Spine Center in North Carolina, evaluated the efficacy and safety of a technique called sacroplasty, a percutaneous injection of synthetic bone cement into sacral fractures, in 52 patients with SIFs. The study, published in the March-April issue of *The Spine Journal*, represents the largest prospective trial of sacroplasty for osteoporosis SIFs.

"Our findings demonstrate that a technique similar to what has been performed for painful spinal osteoporotic fractures is equally effective for osteoporotic pelvic fractures," said Michael DePalma, M.D.,

associate professor in the Department of Physical Medicine and Rehabilitation in the VCU School of Medicine, who led the team at VCU.

"Furthermore, the results are very encouraging in that patients typically experience rapid and significant improvement in low back pain and reduction in disability and narcotic pain medication utilization," he added.

According to DePalma, who is the medical director of the VCU Spine Center, the technique allows the patient to participate in physical therapy much sooner than those who have not undergone treatment. Additionally, pharmacologic and dietary treatment options for the osteoporosis may also be addressed following the sacroplasty.

Moving forward, the team will examine patients to more clearly determine the incidence of side effects. Additionally, they will further refine the technique to better understand the biomechanics of the osteoporotic pelvis.

The VCU Spine Center offers a multidisciplinary comprehensive team approach to the management of patients with all spine ailments and chronic painful conditions. It addresses surgical, pain management and rehabilitation needs for these patients aiming to restore appropriate level of function.

DePalma collaborated with Michael E. Frey, M.D., the corresponding author on the study, and Jonathan S. Daitch, M.D., with Advanced Pain Management and Spine Specialists; David X. Cifu, M.D., and William Carne, Ph.D., with the VCU Department of Physical Medicine and Rehabilitation; and Sarjoo M. Bhagia, M.D., with the OrthoCarolina Spine Center.

Source: Virginia Commonwealth University

Citation: Minimally Invasive Technique May Offer Quick and Safe Pain Relief in Osteoporosis Patients with Low Back Pain (2008, March 17) retrieved 9 April 2024 from <https://medicalxpress.com/news/2008-03-minimally-invasive-technique-quick-safe.html>

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