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Non-Surgical Vertebroplasty is Effective Pain Treatment for Spinal Fractures Caused by Osteoporosis

Fairfax, VA (September 24, 2002) – A new study published in the September issue of the *Journal of Vascular and Interventional Radiology* (JVIR)¹ shows that vertebroplasty dramatically improves back pain within hours of the procedure, and confirms the sustained, long-term pain relief and low complication rate demonstrated in previous studies^{2,3,4,5,6}. Vertebroplasty, a non-surgical treatment performed under guided imaging by interventional radiologists, stabilizes the collapsed vertebra with the injection of medical grade bone cement into the spine. This improves pain, and can prevent further collapse of the vertebra, thereby preventing the height loss and spine curvature commonly seen as a result of osteoporosis.

If the vertebra isn't shored up, it can heal in a compressed or flattened wedge shape. Once this occurs, the compression fracture cannot be treated effectively. "It is very important for someone with persistent pain in their spine lasting more than three months to consult an interventional radiologist, and people who require constant narcotic pain relief should seek help immediately," says J. Kevin McGraw, MD, co-director of vascular and interventional radiology at Riverside Methodist Hospital, Columbus, Ohio.

Study Results

This is a prospective study to determine the efficacy of vertebroplasty for the treatment of back pain associated with vertebral body compression fractures and to evaluate the extent of pain relief afforded by the procedure. The study included 100 consecutive patients, 92 of whom had compression fractures caused by osteoporosis (79 women, 21 men; mean age 73.7y). Ninety-seven patients (97%) reported significant pain relief 24 hours after treatment. Mean follow-up was 21.5 months in 99 patients. Ninety-two of these 99 patients (93%) reported significant long-term improvement in back pain as well as improved ambulatory ability. Pain was measured by the Visual Analog Scale (VAS), a 10-point scale with 0 representing no pain and 10 representing the most severe pain. Before vertebroplasty, the mean VAS pain score was 8.91 ? 1.12. At 21.5 months follow-up, the mean VAS score was 2.02 ? 1.95.

"The results of vertebroplasty are very exciting, and this study confirms a growing body of evidence that vertebroplasty provides long-term and rapid pain relief. Before treatment, many of these patients are in constant pain, and cannot manage every day activities. Vertebroplasty can give patients their lives back," says McGraw.

About Vertebroplasty

Vertebroplasty was first performed in France in 1984 to treat compression fractures caused by bone cancer or bone metastasis, and later to treat compression fractures caused by osteoporosis. Percutaneous vertebroplasty was introduced in the United States in 1994 and has become widely available since 1997 as a treatment for pain associated with compression fractures due to osteoporosis. The procedure has been shown to provide continued pain relief for osteoporotic compression fractures. A 1998 study by Deramond and colleagues reported on 80 patients with rapid and complete pain relief in more than 90 percent of osteoporotic cases². The follow-up in this patient population ranged from one month to 10 years with evidence of prolonged pain relief. Vertebroplasty is likely to become a standard of care for treating osteoporotic compression fractures as more patients and physicians become aware of the new advances in interventional radiology.

Vertebroplasty is indicated for painful vertebral compression fractures that fail to respond to conventional medical therapy, such as minimal or no pain relief with analgesics or narcotic doses that are intolerable. Vertebroplasty is an outpatient procedure performed under x-ray guided imaging and conscious sedation. The interventional radiologist inserts a needle through a nick in the skin in the back, directing it under fluoroscopy (continuous, moving x-ray imaging) into the fractured vertebra. The physician then injects the medical-grade bone cement into the vertebra. The cement hardens within about 15 minutes and stabilizes the fracture.

About Osteoporosis

Osteoporosis is characterized by low bone mass and structural deterioration of the bone resulting in an increased susceptibility to fractures. According to the National Osteoporosis Foundation, osteoporosis affects 10 million Americans and is responsible for 700,000 vertebral fractures each year. Multiple vertebral fractures can result in chronic pain and disability, loss of independence, stooped posture and compression of the lungs and stomach. Nearly all vertebral fractures in otherwise healthy people are due to osteoporosis, and can occur from a minor impact, such as a bump or a fall, in those who suffer from this bone weakening disease. People who have a spinal fracture often don't realize that they may have osteoporosis, because the disease is symptomless until a fracture occurs.

About the Society of Interventional Radiology

The Society of Interventional Radiology represents interventional radiologists — physicians who specialize in minimally invasive, targeted treatments performed using imaging guidance. Interventional radiology procedures are a major advance in medicine that do not require large incisions, and offer less risk, less pain and shorter recovery times compared to surgery. Interventional radiology advances include the pioneering of angioplasty, the peripheral stenting technique, and the invention of the first catheter-delivered stent — state of the art treatments that are common place in medicine today.

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