



# INTERVENTIONAL UPDATE

Volume 09, Issue IR01, July 2009

## Interventional Treatment of Vertebral Compression Fractures



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### BACKGROUND

Osteoporotic vertebral compression fractures are a leading cause of disability and morbidity in the elderly. The consequences of these fractures include pain, progressive vertebral collapse with resultant kyphosis, and systemic manifestations related to immobility and narcotic side effects.

### TREATMENT OPTIONS

Conservative treatment has been unsuccessful in a portion of this population and for this group, minimally invasive vertebral augmentation can be beneficial, while maintaining a safe risk profile. Patient quality of life is promptly improved. We have treated about 170 such patients since March 2006. Intravenous conscious sedation is typically adequate, making the techniques useful in patients with compromised cardiopulmonary status. These procedures may be performed on an inpatient or outpatient basis.

### VERTEBROPLASTY

Vertebroplasty involves the injection of methylmethacrylate, an FDA-approved medical-grade tissue adhesive, directed into the fracture with the goals of pain relief and prevention of further vertebral body collapse.

### KYPHOPLASTY

Kyphoplasty is designed to address vertebral endplate deformity and kyphotic deformity as well as fracture pain. The use of balloon tamps to create a cavity at the fracture site may allow for safer methylmethacrylate delivery with reduced extravasation rates.

### INDICATIONS AND RISKS

Vertebral augmentation is indicated in patients with refractory fracture pain and disability. Length of stay can be minimized in patients admitted for pain control. Ninety percent of patients have substantial pain relief and improved mobility within 48 hours. Contraindications include unstable burst fracture, infection of target vertebra, and uncorrectable coagulopathy. The rate of serious complications is estimated at 1-2% and those most often reported are radiculopathy, new fracture, infection and paresis. Sedation risks should also be noted. Adverse sequelae such as myocardial infarction and pneumonia are rare possibilities.

### DETECTION

Spine MRI is the most useful radiology exam in these patients, since the detection of vertebral body marrow edema allows for diagnosis of acute or subacute fracture. Other conditions such as disc herniation, discitis, and spinal stenosis can be excluded. When MRI is not feasible, the combination of spine CT and bone scan is recommended.

## WHO TO CALL

Percutaneous vertebral augmentation allows for treatment of problematic compression fractures while maintaining a safe risk profile. Patient quality of life is promptly improved. If you have questions or concerns, as always, please don't hesitate to contact me or one of my interventional colleagues at 231.935.2861.

## CLINIC LOCATION AND RESOURCES

The clinic is located at 312 Munson Professional Building at Munson Medical Center. The clinic operates daily from 7:30am to 4:00pm and can be reached by phoning 231.935.2861. Questions or referrals can also be directed to any of the four interventional radiologists by paging us through the Munson operator. We continue to offer around-the-clock coverage for inpatients and emergencies and are available 365 days a year.

We look forward to working with you and your patients.



### Interventional Vascular Radiology Team

From left to right: Michelle Lung, M.D., Frederick Brodeur, M.D., James Picotte, M.D., Daniel Dall'Olmo, M.D.

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Publication of Grand Traverse Radiologists, P.C.