

Kyphoplasty and Vertebroplasty

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What are Vertebroplasty and Kyphoplasty?

Vertebroplasty and Kyphoplasty are minimally invasive procedures which treat spine fractures caused by osteoporosis and cancer. Both procedures involve the injection of bone cement into the vertebral body through a needle inserted into the vertebral body creating an “internal cast”. Both procedures are used to provide rapid and sustained back pain relief with minimal recovery.

With kyphoplasty, the spinal fracture may be “reduced” with a balloon device and upon removal, cement is injected into the space. Kyphoplasty can help to straighten the spine and help to prevent additional fractures. With vertebroplasty, cement is injected into the vertebral body to stabilize the fracture. The type of procedure performed is dependent on the location and severity of the fracture, as well as, the length of time since the fracture occurred.

Indications

Osteoporotic or tumor induced vertebral fracture less than 6 months old with persistent pain, not responding to conservative treatment.

Accepted standard conservative medical treatment is defined as:

Initial bed rest with progressive activity; and narcotic or non-narcotic analgesics; and back bracing.

Medical treatment of osteoporosis.

The ideal candidate: has had an acute fracture for less than 4 weeks; will not tolerate prolonged analgesics and; will not tolerate prolonged bedrest.

Contraindications

Active infections, inability to lie prone, inability to tolerate IV conscious sedation.

Benefits and Risks

Overall, 9 out of 10 patients experience sustained pain relief and increased mobility. Narcotic use and bed rest is less than non-surgically treated patients. Left untreated VCF's are associated with an increased risk of further collapse, future fractures, chronic pain, spinal deformity and kyphosis.

Although the complication rate is low, vertebroplasty and kyphoplasty have risks to be considered including: infection, complications from sedation and, cement leakage causing pain or paralysis. Our radiologist will thoroughly explain risks and benefits prior to the procedure.

How Does Your Patient Prepare?

Prior to treatment, an MRI will be performed to determine the extent and exact location of the fracture. We will contact your patient to schedule the MRI. This does not require a prior authorization from your office. If your patient cannot have an MRI because of a pacemaker or stimulator, a bone scan can be performed. Your patient will be scheduled at Iowa Methodist Medical Center in the radiology department. We require a current physical and history be obtained at least 30 days prior to the procedure. IV conscious sedation will be administered for the procedure.

Patients are generally released from the hospital the same day. Plan approximately one hour per fracture level treated and 3-4 hours for recovery.

Patients will require a driver.

What Happens During the Procedure?

Your patient will be asked to lie face down on the operating table. Once the sedation has been administered, the interventional radiologist makes a small 2 to 3 mm size incision in the back. Guided by fluoroscopy x-ray a needle is inserted into the fractured bone. The fracture is filled with bone cement. Generally, the procedure is done on both sides of the vertebral body.

In kyphoplasty, the fractured cavity is expanded with a balloon. Once inflated, it causes the collapsed vertebrae to be lifted and a space is created. The balloon is removed and cement is injected into the cavity created by the balloon. The cement forms an internal cast which dries in about 15 minutes.

Following the Procedure

Your patient will be moved into recovery for 3-4 hours. Most patients may resume normal activities the next day. Any special instructions will be given to your patient after the procedure. Pain relief and increased mobility may be immediate or take a few days. We will place a follow up call to your patient two weeks after the procedure to see how he or she is doing.