Kyphoplasty and Vertebroplasty

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What is a compression fracture?

Compression fractures refer to low energy fractures that occur in the spine. They are not as serious as other fractures such as burst fractures and fractures associated with dislocations. As a person ages, they may develop osteoporosis. A compression fracture can occur in these individuals even with the most trivial trauma. Moreover, a compression fracture can occur even without any trauma.

What kind of problems do compression fractures cause?

Usually, the patient will have sudden onset of pain near the area of the fracture. However, the pain can even be at an area remote from the fracture site. This pain is usually worse with increase in activity, deep breathing, coughing, and sneezing. Multiple or recurrent compression fractures can cause kyphosis (hunchback) and decrease in the overall height of the patient. This may lead to chronic pain and pulmonary problems.

How does one prevent compression fractures?

Since they are associated with osteoporosis, preventive treatment is aimed at treating the underlying osteoporosis. A DEXA scan can be used to diagnose osteoporosis. Treatment includes many different types of medications that affect bone metabolism. In addition, an exercise program that involves impact type of activities is strongly recommended.

How do you treat a compression fracture?

The type of treatment is dependent on the severity of the pain and the extent of the fracture and deformity. A stable fracture without much associated pain is treated with "benign neglect". If there is severe pain and he fracture is stable, a Vertebroplasty or Kyphoplasty is usually recommended. In unstable fractures and fractures associated with neurologic deficits and severe kyphosis, bracing and other forms of surgery may be recommended.

What is vertebroplasty and Kyphoplasty?

These are two relatively new procedures that are used to treat stable compression fractures. In Vertebroplasty, methyl methacrylate (bone cement) is injected directly into the fractured vertebrae through two small stab wounds in the back. The cement hardens and gives the fractured vertebrae more stability. This causes a reduction in the pain level. A Kyphoplasty is very similar to Vertebroplasty. In Kyphoplasty, however, a balloon is inflated and then deflated in the vertebrae to create a void in the bone. This is followed by injection of the cement. It is controversial as to whether one procedure is better than the other. Vertebroplasty is generally done with a local anesthetic while Kyphoplasty is

generally done with a general anesthetic. Patients can go home the same day after either procedure.

What are the typical results of these procedures?

Most patients seem to do very well with these procedures. The pain relief is significant. It has been my experience that mild, stable, single level fractures respond more favorably then other fractures. It should be emphasized, however, that if the underlying osteoporosis is not treated, the patient is still at risk for developing another fracture in the spine.