

Osteoporotic Vertebral Compression Fractures

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Vertebral body compression fractures are the most common fracture caused by osteoporosis ahead of both fractures of the wrist and hip respectively. Each year in the U.S. more than 700,000 vertebral fractures occur. Of these, 260,000 patients are diagnosed with painful vertebral compression fractures refractory to narcotic pain relievers resulting in 150,000 hospitalizations.

Conventional treatment has consisted mainly of palliative care such as bed rest, narcotic pain medicines, and back bracing. However, patients treated conventionally have been at risk from suffering the long term consequences including spinal deformity, functional impairment, decreased quality of life, loss of pulmonary function as well as an increased mortality rate overall.

Kyphoplasty is a technique that involves the use of a percutaneous balloon tamp that has been FDA approved since 1999. The balloon is inserted via a trocar percutaneously into the fractured vertebra. Slow inflation of the balloon in some cases is able to improve the shape of the fractured vertebral body. The balloon device creates a hole or cavity in the vertebral body which is then filled with bone cement (polymethylmethacrylate) and hardens thereby stabilizing the fracture. The results have been encouraging both in terms of immediate pain relief and deformity correction. The procedure involves an overnight stay in the hospital.

Patients with vertebral compression fracture typically present with a sudden onset of pain and/or localized tenderness accompanied by muscle spasm. Early diagnosis and treatment are important for fracture reduction.