

KYPHOPLASTY - EXPERIENCE OF 90 CASES OF OSTEOPOROTIC VERTEBRAL FRACTURES COMPARED TO OTHERS SURGICAL TECHNIQUES

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Introduction

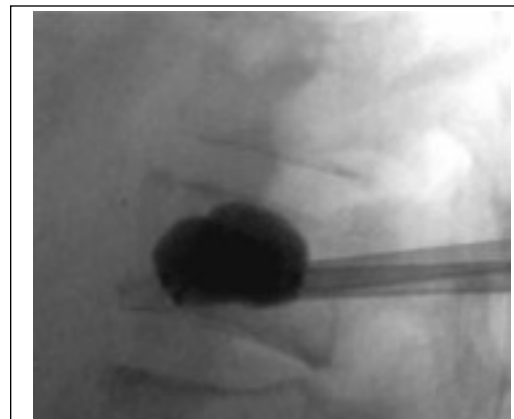
Approximately 1.5 million fractures secondary to osteoporosis occur in the United States each year; 700,000 of these are spine fractures—more than hip and wrist fractures combined. Worldwide, one in three women and one in eight men over the age of 50 are affected by osteoporosis or osteopenia (low bone density). The fracture angles the spine forward and produces a hunchbacked appearance, called kyphosis. Patients with this condition are subject to debilitating pain, disturbed sleep, decreased lung and intestinal function, and difficulty completing routine activities.

Methods

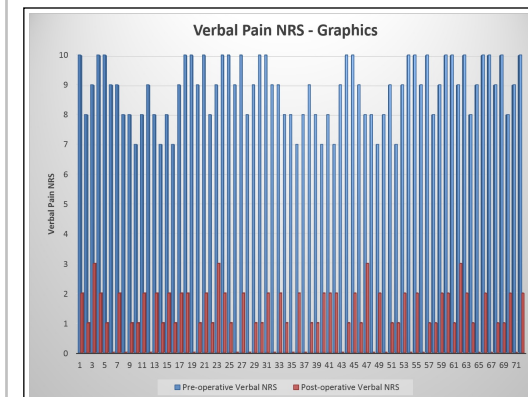
We will show in this paper report the positive experience in 90 cases of osteoporotic vertebral fractures, treated with kyphoplasty in compares to others surgical techniques like vertebroplasty. We selected only cases with vertebral osteoporotic fractures, with back pain, using a simple verbal 0-10 numerical rating scale (verbal NRS) low strength deficits, some with initial deformity and history of minor spine traumas followed with the symptoms.

Results

In the past, surgeons used standard open surgical procedures to fix compression fractures from osteoporosis. Open procedures require larger incisions to give the surgeon more room to operate. The results of open surgery for this condition have generally been poor, mainly because operating on bones that are weak and soft from osteoporosis is difficult. The minimally invasive technique come with technology evolution, first with vertebroplasty, a good advance in this kind of treatment, however with other kind of risks, Some of the most common complications includes: problems with anesthesia, thrombophebitis, infection, ongoing pain and cement leakage * The cement used in the procedure is squeezed with high pressure into the fractured vertebra in liquid form and high temperature. cement leakage during vertebroplasty wasn't rare. If some of the cement happens to leak out of the vertebra, it usually cause problems. Cement leak could cause pressure on the spinal cord or nearby nerves. In these cases, surgery may be required to remove the pressure, by laminectomy.



Kyphoplasty gives surgeons a way to fix the broken bone without the problems associated with open surgery. Unlike open surgery, which involves an incision and the use of larger instruments, kyphoplasty is a minimally invasive procedure. It requires a small opening in the skin and small instruments. This lessens the chance of bleeding, infection, and injury to muscles and soft tissues. The goal of kyphoplasty is to return the fractured vertebra as close as possible to its normal height. This is done by inflating a balloon inside the fractured bone to restore the vertebral body to its normal size. Special cement is then injected into the bone, fixing it in place. The cement strengthens the broken vertebra and stiffens it in its original height and position. This reduces pain (verbal NRS) and spine deformity (kyphosis), enabling patients to get back to normal activities. The cement used in kyphoplasty is squeezed into the fractured vertebra in a pasty form. Because it is injected at low pressure, cement leakage during kyphoplasty is rare. If some of the cement happens to leak out of the vertebra, it usually doesn't cause any problems.



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Conclusions

Our results show kyphoplasty is a safe and effective method to relieve pain (verbal NRS) and correct the deformity associated with an osteoporotic VCF. All patients have a shorter time recovered and pain relieve in 90%, some deficits of strength get also better. The technique are successful about the time in relieving the pain of fractured vertebrae. Kyphoplasty is more helpful in correcting vertebral collapse if it is done within six weeks of the fracture. When well indicated, the method shows better time recovered and pain relieved to the patients. The technique it's very secure, because the void created by the balloon inside of the vertebral body also allows for bone cement to be deposited under low pressure, thus decreasing the possibility of cement extravasation outside of the vertebral body.

