

Compressed Vertebra

Overview: The vertebral column is a series of 24 bones, muscles and ligaments that protect the nerves of spinal cord. Each bone is called a vertebra. The vertebra is about the size of a child's toy block, only round. Behind this body of the vertebra is the spinal cord followed by a roof of bone called the lamina. The vertebral body and lamina surround and protect the spinal cord from injury (see diagram). As we age, our bones lose calcium and are more prone to fracture. This process of calcium loss is called osteoporosis and is very common in older women. In the presence of osteoporosis, the vertebral bodies can break and collapse, a process known as a compression fracture. Compression fractures most commonly take place in the mid and low back because the weight of the body is carried there. The fracture can be a source of severe pain because the bone is broken and the nerves next to the spinal cord are pinched.

Diagnosis: Patients with compression fractures complain of sudden onsets of mid and low back pain. The pain may be experienced along the course of the nerves next to the compression fracture. If the vertebrae of the lumbar spine are involved, the patient may experience leg pain. In the mid back or thoracic region, the pain may radiate to the front underneath the breast. If the doctor suspects a compression fracture, X-rays of the spine will be ordered. Compression fractures are usually readily apparent on a standard X-ray.

Treatment: The initial treatment for compression fractures is bed rest and pain medications. This gives the fracture time to heal, unfortunately however, the bone will heal in the collapsed position. Once the bone heals, it stops hurting but the nerves remain pinched, causing chronic pain. If chronic pain develops, the patient may need moderate doses of appropriate narcotic medications such as Tylenol #3, Darvocet or Vicodin. Excessive use of these drugs must be avoided because of the long-term toxic effects to the kidneys or liver. If, despite the use of appropriate medications, the patient is still experiencing significant discomfort, nerve block techniques may be able to resolve the pain. Traditionally, epidural injections are given. With this technique, powerful anti-inflammatory drugs are injected along side the nerves where they are pinched. This helps relieve swelling and inflammation, thereby resulting in pain relief. Nerve block techniques have to be used cautiously because the medication is an anti-inflammatory steroid, cortisone-type drug. Long-term use of cortisone can actually lead to osteoporosis and cause more compression fractures. The injections are usually given as a series of two or three over a period of weeks. In the event of a compression fracture, no more than two or three series should be given in the course of any one year. In addition to injections, braces can be used to help stabilize the joints. Although this may prevent further fractures, it cannot alleviate the compression of the old fracture. Compression fractures are a serious problem that can be difficult to treat. Ultimately, patients will need a combination of injections, medications and bracing to achieve a significant level of comfort.