

Vertebroplasty

Introduction

Vertebroplasty (V-plasty) is a minimally invasive procedure done primarily to relieve pain caused by compression fracture of the spinal vertebrae (spinal bone). A compression fracture occurs when pressure on the bone making up the spine causes it to break. During the V-plasty a physician injects bone cement into the affected vertebra which stabilizes the bone and relieve pain. The procedure is most effective for fractures that are less than six month old. If you have a medical condition that prevents you from lying on your stomach for one to two hours, if you have a bleeding disorder or cannot be taken off blood thinners you may not be good candidate for V-plasty

How is it done?

Prior to having V-plasty, it's necessary to have an X-Ray of the spine as well as MRI or bone scan. These tests help to identify which vertebrae are fractured and how recently the fracture occurred. Your health care provider will examine you and evaluate your test results.

The procedure is done in X-Ray room. It will require mild to moderate IV sedation and therefore you will need to have an IV line. You will be asked to lie on your stomach on the X-Ray table. The skin over the affected vertebrae will be cleaned and sterile towels placed around the area. The skin and the bone will be numbed with local anesthetic. Then specially designed needle is inserted into bone utilizing the X-Ray camera. When the needle is in correct position, bone cement is injected into the vertebrae. The X-Ray camera allows your physician to observe the cement as it's injected. It's usually necessary to insert two needles into the vertebrae to complete the procedure.

1. Vertebral Compression Fracture, causing pain and spinal deformity.
2. A biopsy needle is guided into the fractured vertebra through a small incision in the skin.
 - a. Inset: magnified view of the interior of the osteoporotic vertebra with the needle in place.
3. Acrylic bone cement is shown flowing into the vertebra, filling the spaces within the bone.
 - a. Inset: Magnified view of the interior of the vertebra with the cement filling in the spaces.
4. Restored vertebra with hardened cement, stabilizing the vertebral structure and relieving pain.
 - a. Inset: Magnified view of the interior of the restored vertebra.

What is the recovery like?

Once the procedure is over, you will be taken to a room where you will be asked to lie flat on your back for approximately 1-2 hours. This gives the bone cement the chance to harden. After resting for several hours you may be discharged home. Occasionally there is a need to stay in the hospital overnight and you should be prepared for it.

You can remove the bandages covering the injection sites on your back in 48 hours following V-plasty. Remember to return to normal activities gradually. You also have to maintain contact with your primary doctor for treatment of the cause of the fracture since V-plasty treats only the fracture but not the underlying disease.

Follow the discharge instructions and call APMC (503)295-0730 if you have any questions.

Benefit Vs Risks

More than 80% of people experience significant pain relief following this procedure. However, there are some risks you should be aware of. The primary risk is that bone cement may leak from the vertebrae into surrounding

tissues and blood vessels. If cement leaks toward the spinal cord or nerve roots the resultant pressure on this structure may cause pain and weakness. This is rare. If bone cement enters blood vessels surrounding the vertebrae it could travel to the lung, causing vessel blockage that may result in chest pain and breathing difficulties. This is also rare. If you have osteoporosis (soft bones) you may be at increased risk for rib fracture from lying on your stomach during the procedure. Occasionally the treated bone can refracture and you may require another treatment.

Other risks include but are not limited to:

- Infection
- Bleeding
- Further fracture of the vertebrae from needle placement.