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1. WHAT IS VERTEBROPLASTY?

Vertebroplasty is a minimally invasive procedure, performed by an interventional radiologist, that can reduce severe spinal pain caused by new osteoporotic vertebral fractures.

Using high quality radiology imaging guidance, a needle is passed through the skin into the vertebral body fracture. Medical grade acrylic cement is injected into the fractured vertebral body. This bone cement stabilises the fracture preventing further collapse, and relieving the terrible pain caused by fracture instability.

2. WHY WOULD MY DOCTOR REFER ME TO HAVE THIS PROCEDURE?

Vertebroplasty is used both for patients who have already been admitted to hospital for pain management as well as patients who are still at home but suffering severe pain. These outpatients can have vertebroplasty as a day only procedure. The procedure is most effective when the vertebral fracture is less than 3 weeks duration, that is, when the really severe pain started with the last 3-weeks. These fractures are usually due to osteoporosis but occasionally are due to multiple myeloma or tumour metastasis. Vertebroplasty is most effective when performed within the first three to weeks of severe pain onset from the fracture.

MRI scan should be performed quickly to see if the fracture is suitable for vertebroplasty. The sooner you undergo the procedure the higher the likely benefit. As the fracture ages and collapses further, the benefits from vertebroplasty begin to reduce. If you cannot undergo MRI because you have a pacemaker or some other reason then CT scan and bone scan are the next best imaging options.

3. HOW DO I PREPARE FOR THE PROCEDURE?

Before Vertebroplasty, a comprehensive evaluation will be conducted. You will discuss your medical history, including any allergies or pre-existing conditions with your interventional radiologist.

If you have a medical condition such as diabetes, hypertension or anticoagulant (blood thinning) therapy, these will all need to be managed before the vertebroplasty procedure is performed.

Prior to the procedure, you will be sedated. This will mean you need to stop eating solid food for at least 6 hours before the procedure. It is not necessary to stop drinking clear fluids, but milk and other similar fluids (including soups) should also be avoided.

4. WHAT HAPPENS DURING THE PROCEDURE?

Vertebroplasty is performed in the Interventional Radiology suite under conscious intravenous sedation, which relaxes the patient and makes the procedure pain free. You will be positioned lying face down with the head turned to the side. A needle is guided into the fractured vertebra using radiology imaging.

A specialised cement mixture is injected into the vertebra, which hardens quickly, stabilising the bone. This takes about 5-minutes to dry and then you are rolled off the table and back onto your hospital bed.

The entire procedure generally takes around 30 to 60 minutes. You will be nursed in bed for 1-2 hours after which you can get up and about.

5. WHAT IS THE RECOVERY NORMALLY LIKE?

Recovery from Vertebroplasty is relatively quick. Most patients experience immediate relief from the pain caused by the fracture. Bending forward and heavy lifting should be avoided to prevent future fractures in other vertebral bones, particularly if your osteoporosis is severe. You can usually resume light activities within a day or two and gradually progress to your regular routine. It's essential to follow post-procedure instructions provided by your interventional radiologist.

6. WHAT ARE THE BENEFITS?

The primary benefit of Vertebroplasty is pain relief. By stabilising the fractured vertebra, the procedure can significantly reduce or even eliminate the pain caused by new vertebral compression fractures. It can also help restore vertebral height which prevents hunching of the back caused by fracture collapse. It improves mobility and quality of life to allow you to return to previous level of activity and independence.

7. WHAT ARE THE RISKS?

While Vertebroplasty is considered a relatively safe and minimally invasive procedure, it is not without some potential risks and complications. Below is a list of some of the primary risks associated with Vertebroplasty:

Bleeding: Bleeding is a potential risk, though it is uncommon because the needle path is not near any major vessels

Nerve Injury: There is a small risk of injuring nearby nerves during the needle placement, which can lead to neurological symptoms such as pain, numbness, or weakness.

Cement Leakage: Cement leakage can occur when the injected cement extends beyond the fractured vertebra. The Interventional Radiologist monitors the cement being injected throughout the procedure. Most cement extravasations do not cause any symptoms but occasionally they can.

Infection: Infection is rare but must be avoided. For this reason the procedure is performed under full sterile surgical precautions.

Allergic Reactions: In rare cases, patients may experience an allergic reaction to the medications administered used during the procedure.

You should discuss any concerns or questions that you have with your interventional radiologist.

8. WHEN CAN I EXPECT THE RESULTS OF MY PROCEDURE?

Results of Vertebroplasty can be immediate, with many patients experiencing a substantial reduction in pain right after the procedure. However, it is important to remember that the speed and extent of pain relief can vary from person to person. In some cases, it might take a few days for the full benefits to become apparent. Vertebroplasty can only help the new severe pain caused by the new fracture. If you have underlying long-standing back pain it will not help that chronic component of the pain.

Vertebroplasty is a valuable interventional procedure for individuals suffering from new onset vertebral compression fractures, offering potential pain relief, improved spinal stability and return to normal functional capacity.

If you're experiencing severe new onset of back pain due to a new fracture, consulting with a healthcare professional can help you explore whether Vertebroplasty is a suitable option to regain your comfort and mobility. Remember that the quicker the procedure is performed after the fracture, the more benefit you are likely to receive. There is a three-week window after the fracture for best results.

You can discuss this procedure further with a professional Interventional Radiologist near you, that you can find using the Find A Doctor feature on this website.

NOTE: Most of the scientific evidence for Vertebroplasty and procedures performed worldwide to date have been by specialised interventional radiologists, so we would advise caution in selecting a practitioner who is a suitably qualified interventional radiologist experienced in embolisation procedures.