

Percutaneous Vertebroplasty

- Interventional Radiology
- August 2024

Introduction

This leaflet has been produced to give you general information about your Percutaneous Vertebroplasty Procedure. Most of your questions should be answered by this leaflet. It is not intended to replace any discussion between you and the Healthcare team, but may act as a starting point for discussion. If after reading it you have any concerns or require further explanation, please discuss this with a member of the healthcare team caring for you.

What is a Vertebroplasty Procedure?

Vertebroplasty is the injection of bone cement into the vertebral body in order to relieve pain and stabilise the fractured vertebra.

Vertebroplasty stabilises fractured or collapsed vertebrae, to reduce or stop the pain caused by the bone rubbing against the periosteum (the thin layer of connective tissue that covers the outer surface of the bone). The painful pressure on the vertebral joints caused by a collapsed vertebra is also reduced considerably. Most patients experience immediate pain relief after the procedure.

This procedure is minimally invasive and is done through a tiny incision on the skin, one or two incisions for each bone that is treated. A needle is placed into the vertebral body using X-ray guidance and the procedure is carried out through the needle. This can avoid a large scar and greater physical trauma of open surgery. You will be nil by mouth for 6 hours prior to the procedure as you will be given sedation or a general anaesthetic.

Why do I need a Vertebroplasty Procedure

Vertebroplasty is considered:

- For a painful osteoporotic fracture when the pain has not been adequately controlled by optimal pain management (pain relief medication etc.)
- For a painful fracture following a fall/spinal injury when the pain has not been adequately controlled by optimal pain management (pain relief medication etc.)
- For a painful vertebra due to a malignant tumour

These are referred to as the “**indications**” for the procedure, or reasons why it might be carried out.

The main aim of the procedure is to control pain. It may also prevent further collapse of the vertebra.

Vertebroplasty is not carried out if:

- The patient is at more risk of bleeding than normal (due to a medical condition or certain medications)
- There is infection in the blood or at the site of the procedure
- The patient already has decreased use of limb(s), bowel or bladder
- Heart, breathing or other problems mean that general anaesthetic or sedation are not safe
- The fracture is not causing symptoms, or is improving with pain relieving medications etc.

These are referred to as “**contraindications**” – the reasons why the procedure would not be carried out.

Can there be any complications or risks?

The main potential adverse effects (complications) of the procedure are extravasation of cement (leaking of cement into blood vessels) and compression of the spinal cord due to leaking of cement backwards out of the body of the vertebra and into the space around the spinal cord.

Other minor risks are infection, bleeding, nerve or spinal cord damage.

Patients who have had one vertebral collapse fracture have a higher chance than other people of having another fracture in the future. It is important to treat the cause of the fracture e.g. osteoporosis. Prophylactic treatment of vertebrae with vertebroplasty above and below the fracture (being treated with vertebroplasty) is sometimes considered to reduce this risk.

How do I prepare for the Vertebroplasty?

Please read the information leaflet. Share the information it contains with your partner and family (if you wish) so that they can be of help and support. There may be information they need to know, especially if they are taking care of you following this examination.

The specialist doctor will carefully evaluate your medical history, current health status and current imaging to determine whether you are a suitable candidate for the procedure.

If you are suitable, you will have a pre-assessment carried out by a nurse usually over the telephone, however, it may be beneficial for you to attend an initial assessment in the Radiology Department.

You will need to give the nurse details of any medications you are taking. If you take any medication to thin your blood, you will be advised about when you need to stop this, to reduce the possibility of excessive bleeding. If you are a diabetic who takes insulin you will be advised accordingly.

For 6 hours prior to your appointment you will be asked to have no food, and only drink water (not fizzy).

For 2 hours before your appointment you will be asked to have no food or drink.

What will happen?

You will be asked to attend the Radiology Day Unit on the second floor at Hull Royal Infirmary.

On arrival you will be greeted by a nurse who will carry out some checks and ask you to change into a hospital gown.

You will meet the Interventional Radiologist who is a doctor with specialist training to perform this procedure. The doctor will discuss the procedure in detail and ask you to sign a consent form. You will have the opportunity to ask any questions and discuss any concerns you may have. It is important to provide informed consent before proceeding with the procedure.

You will also meet the anaesthetist who is responsible for making sure that you are comfortable during the procedure, although it is unlikely that you will have a full anaesthetic. You will have a combination of drugs that make you feel very sleepy, minimise any pain, and may cause you to forget what has happened during the procedure.

It may be necessary for you to have a full general anaesthetic if you need to have several fractures treated in one appointment, or for other medical reasons.

You will be taken into the Interventional Radiology Theatre where you will be assisted to lie on your tummy with your arms above your head. If this is likely to be a problem because you have breathing difficulties or shoulder problems, for example, you will need to inform the staff beforehand.

The anaesthetist will give you the necessary drugs, and your back will be cleaned with antiseptic and covered with a sterile towel. The radiologist will check the position of your fracture using X-rays, and give local anaesthetic into your skin. The Radiologist will insert special needles into the fracture(s) and inject the cement, using the X-ray machine for guidance. When the cement is in position, the needles will be removed and dressings will be applied to the puncture sites.

What happens afterwards?

You will be helped back onto a trolley where you will rest in the Radiology Day Unit until you are fully awake.

You will be offered a drink and something light to eat, but please bring something with you if you have any special dietary requirements.

You will be advised when you can get up and move around. You may experience some mild discomfort or soreness at the injection site. The specialist doctor will provide guidance on managing pain and monitoring for any complications.

If you feel well and all your observations are satisfactory, you will be able to go home within a couple of hours. You will need to arrange for someone to take you home by car or taxi. It is not advised to travel home on public transport.

You will be given a post-procedure advice sheet, it is essential to follow all the instructions to minimise the risk of complications.

Should you require further advice on the issues contained in this leaflet, please do not hesitate to contact the Radiology Day Unit on 01482 675667 during office hours of 8am-6pm, Monday to Friday.

Outside of these hours, please contact your GP or your Referring Consultant.

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