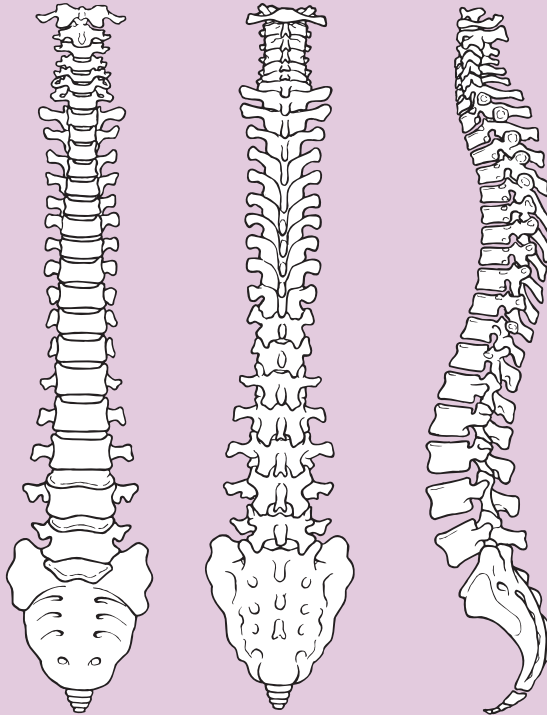


Vertebroplasty



Following your recent investigations and consultation with your spinal surgeon, your scans have revealed that you have one or more **fractured vertebrae** (bones of the spine).

This could have been caused by osteoporosis, injury to your back or less commonly cancer, as these can weaken a bone's structure. This can cause the bone to squash down at the front (anterior wedge compression fracture). This type of fracture of the vertebral bone can cause extreme back pain along with other symptoms, such as losing height, spinal deformity or a 'hunched' appearance because of the increased forward tilt of the spine. These appearances can be more pronounced the more bones that are involved.

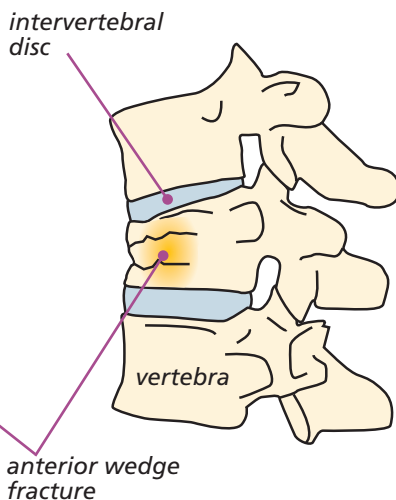
The 'hunched' appearance due to fractured vertebrae



In certain circumstances if the condition worsens, it can lead to collapse or narrowing of the spinal canal and pressure on the spinal nerves. This can cause pain, numbness, increased sensitivity or even weakness of the muscles down the leg supplied by that particular spinal nerve (sciatica).

MRI scan showing fractured vertebra (anterior wedging)

Diagram showing fractured vertebra (anterior wedging)



Previously, these compression fractures were treated by conservative measures, such as strong medication, bed rest and/or bracing.

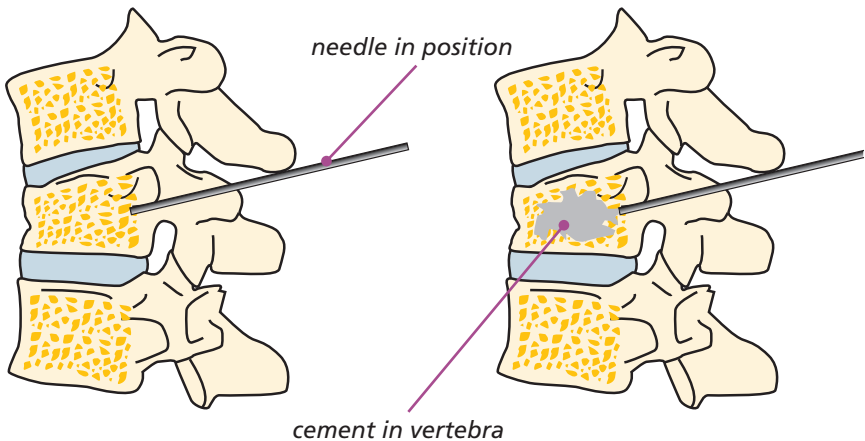
Vertebroplasty is a medical procedure where bone cement is injected into a fractured vertebra in order to stabilise it and reduce the pain.

The procedure

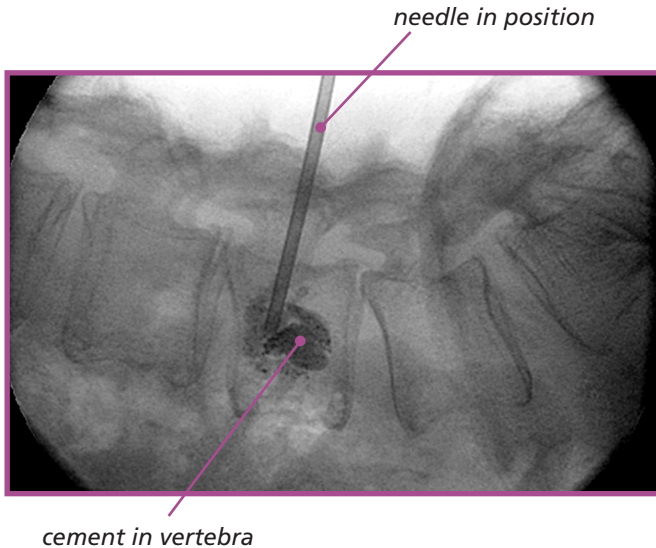
The procedure is carried out under a general anaesthetic, so you are fully asleep, lying on your stomach. The skin on your back is cleaned with antiseptic solution and a small incision is made to one or both sides of the midline. There will be a small incision for each vertebra requiring treatment.

A hollow needle is then passed down through the muscle into a bony passage (pedicle), which goes from the back of the spine to the front of the vertebral body. Live (video) X-ray is used as guidance to direct the needle into this area. Several X-rays are taken from the side and back views, to ensure that the needle is through the pedicle and into the vertebra, before the cement is injected.

Diagram showing needle placement and insertion of cement



X-ray (side view) showing cement in vertebra



Risks and complications

As with any form of surgery, there are risks and complications associated with this procedure.

These can include:

- leakage of the cement outside the vertebral body, which could cause thermal (heat) and pressure problems in the spinal canal. This in turn could cause neurological (nerve) problems including, in extreme cases, paralysis;
- travelling of particles of cement, air, bone marrow fat or tumour, into the blood vessels causing a blockage (embolisation). This could in extreme cases put stress on the lungs, heart or other organs;
- cement sensitivity, which could cause the heart to have irregular beats. This could, in extreme cases, bring on a cardiac arrest (the heart to stop) and death;

- infection. Superficial wound infections may occur in 2–4% of cases (up to 4 out of 100 people). These are often easily treated with a course of antibiotics. Deep wound infections may occur in < 1% of cases (fewer than 1 out of 100 people). These can be more difficult to treat with antibiotics alone and sometimes patients require more surgery to clean out the infected tissue. This risk may increase for people who have diabetes, reduced immune systems or are taking steroids;
- bleeding. You must inform your consultant if you are taking tablets used to thin the blood, such as warfarin, aspirin or clopidogrel. It is likely you will need to stop taking them before your operation as they increase the risk of bleeding;
- the increased strength in the vertebra following vertebroplasty, may increase the chances of the adjacent vertebral body wedging in the future;
- problems with positioning during the operation which might include pressure problems, skin and nerve injuries and eye complications including, very rarely, blindness. A special gel mattress and protection is used to minimise this;
- there are also rare but serious complications which could result from anaesthetic or medical problems.

What to expect in hospital

Immediately after the procedure you will be taken to the recovery ward, where nurses will monitor your blood pressure and pulse. Oxygen may be given to you through a facemask to help you wake up after the sedation. Once back on the ward, if you have some discomfort, the nursing staff will give you appropriate medication to help control it. When you are fully awake and comfortable, you will be allowed to get out of bed. This may be the same day.

Going home

If you do not require any further treatment for your condition, you will normally be allowed home the following day, when you and your physiotherapist are happy with your mobility.

Please arrange for a friend or relative to collect you, as driving yourself or taking public transport is not advised for 48 hours after the anaesthetic. If you are likely to require hospital transport, please arrange this through your GP before admission.

Work

You will need to be off work for at least 48 hours or maybe longer if discomfort persists. The hospital can give you a sick certificate or you can ask your GP.

Follow-up

You may be sent an appointment to return to the spinal clinic 8–12 weeks after the procedure if you are not already undergoing check-ups with another consultant who referred you for this treatment. If you have any queries please contact the spinal nurse specialist for your consultant's team.

If you have any questions regarding the above, please discuss them with either the ward nurses or a member of your consultant's team.

Produced, researched and revised by spinal nurse specialist Helen Vernau at The Ipswich Hospital NHS Trust, in association with and on behalf of the BASS Consent and Patient Information Committee.

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