www.langdonspine.com
+44 1582 714 304
langdonpa@spirehealthcare.com

Balloon kyphoplasty

What is balloon kyphoplasty and why do we do it?

Balloon kyphoplasty is a minimally-invasive procedure used in the treatment of acute, painful osteoporotic vertebral compression fractures. It is designed to stabilise the fracture and help correct the deformity in the vertebral body. Many patients experience an immediate improvement in their back pain following a balloon kyphoplasty.

Osteoporotic vertebral compression fractures often occur without any history of notable trauma. They can cause significant pain. In most patients the pain improves within 6 weeks as the fracture starts to heal. We would consider balloon kyphoplasty if:

- The patient is unable to tolerate the pain
- X-rays show that there is progressive collapse of the vertebral body
- The pain is not improving after four to six weeks

A fracture can usually be clearly seen on an X-ray. However, X-ray does tell us whether the fracture is an acute, recent fracture or a chronic, healed fracture. If we are considering treating a fracture with balloon kyphoplasty then a MRI scan is required first, as this allows us to determine if the fracture is acute or not.

Before you come into hospital

If you are on any medication that has the potential to thin your blood such as aspirin, clopidogrel, warfarin, rivaroxaban or any other blood thinning medication then we do need to know about this prior to the date of your operation as this will usually need to be stopped prior to your operation.

If you take anti-inflammatory tablets, then you must stop taking them seven days before your operation as these drugs can also affect blood clotting.

How do we do a balloon kyphoplasty?

A balloon kyphoplasty is normally carried out under general anaesthetic, though it can also be safely done using sedation and local anaesthetic. The patient is positioned on their front on the operating table. The procedure is carried out under X-ray guidance.

A small incision (less than one cm) is made in your back. A small tube is inserted into the fractured bone. A small balloon is inserted down the tube into the fractured vertebral body. This balloon is carefully inflated to create a space within the fractured vertebral body. Balloon inflation also has the

potential to correct some of the fracture deformity of the collapsed vertebral body. The balloon is then deflated and removed, leaving a small cavity within the vertebral body. This cavity is then filled with bone cement, which stabilises the fractured vertebrae. The small tube is then removed.

These steps are performed on both sides of the spine. Generally, the procedure takes about 45 minutes. The wounds will be closed with butterfly stitches. There will be no stitches that need to be removed.

What are the risks?

Infection – The risk of infection is less than 1%. All patients receive a dose of intravenous antibiotics when they are going off to sleep. If you develop an infection it is most likely to be a superficial wound infection that will resolve with a short course of oral antibiotics.

Bleeding – Blood loss is usually minimal with a balloon kyphoplasty.

DVT – Developing blood clots in the legs (deep vein thrombosis – DVT) is a risk of any surgery. We worry about DVTs as bits can break off a travel around your body. This is called an embolus. An embolus can affect your breathing, cause you to have a stroke, and could potentially be fatal. DVTs occur in approximately one in 200 patients having back surgery. An embolus is a much less common occurrence. We minimize the risk of DVT by asking patients to wear hospital stockings following their surgery (TEDS), and by using mechanical pumps on the lower legs during and immediately after surgery. These pumps squeeze your lower legs, helping the blood to circulate. They are put on when you go to sleep and stay on until you start to mobilise. We encourage early mobilisation as this also helps to prevent DVTs. If a patient is considered to be high risk for a DVT then we will prescribe blood thinning medication for a couple of weeks after your surgery.

Nerve injury – The opening made into the fracture bone is very close to the emerging spinal nerves. In doing this procedure there is a risk of physical damage to the nerve. This can lead to loss of nerve function with persisting pain, weakness, and numbness in the territory of that nerve. This risk is kept to a minimum by the use of X-ray.

Cement leakage – When injecting the bone cement there is a chance that some of it may leak out of the vertebral body. If this happens it can cause compression of the nerves resulting in leg pain. This may require further surgery to remove the piece of cement. The use of the balloon technique keeps the risk of cement leakage to a minimum.

Back pain – Balloon kyphoplasty is intended to treat your acute fracture pain. It will not relieve you of any other back pain that you may have due to pre-existing wear and tear.

Adjacent level fracture – Having had a vertebral compression fracture, you are at risk of having further fractures at adjacent levels.

Risks associated with having an operation lying on your front – when getting you ready for surgery, care is taken to ensure that everything is protected. The does however remain a small risk of pressure damage. This can cause some temporary skin damage to areas such as the tip of your nose and chin as well as to your torso. This would be expected to recover within two to three weeks. There is a very small risk of some damage to your vision. Visual damage is reported as occurring in 1

in 10,000 cases.

Medical complications - Prior to being admitted to hospital you will go through a pre-operative assessment process. This is to ensure that you are as fit as possible for your operation. If you have a chronic condition that is found to be poorly controlled or if a new condition is identified by the pre-operative assessment, then your operation may need to be delayed in order for your medical condition to be optimised. General anaesthesia for elective surgery is very safe. Occasionally unexpected medical events (such as a stroke or heart attack) can occur under general anaesthetic or in the early post-operative recovery period. Fortunately, the risk of death under anaesthesia is very rare. Death as a direct result of general anaesthesia is reported as occurring in 1 in 100,000 cases.

Following any operation there is a small risk of post-operative medical complications, such as chest infections or urine infections.

What can I expect following my balloon kyphoplasty procedure?

When you wake up following your operation you will feel bruised in your back. We try and minimise this by injecting local anaesthetic around the wound. Many patients report an immediate improvement in their back pain.

Following the procedure there will be no formal restrictions placed on you. You can increase your activity level as comfort allows. This procedure is usually done as a day case, though in some cases it may be necessary for a patient to stay in hospital overnight.

What next?

If you have sustained an osteoporotic vertebral compression fracture and are not on any treatment for osteoporosis, then you should make an appointment to see your GP to discuss whether or not you should be on treatment.

Driving – There is no restriction with the DVLA, though there will be with your insurance company. You will need to be able to undertake an emergency stop and be in complete control of your car at all times without being distracted by pain. If this is not the case, then your insurance will NOT be valid. Most patients are back to driving within 2-3 weeks of their surgery.

Flying – You should not fly for two weeks following your surgery. You should not undertake any long-haul flights for six weeks. If traveling on a long-haul flight within six months of your operation, then you should wear your hospital stockings when flying.

Follow-up

You will be seen back in the clinic a few weeks after your operation. An appointment will be made for you before you are discharged.

More information can be found in the booklets section of the patient's area on the British Association of Spine Surgeons website (www.spinesurgeons.ac.uk)