

## **Kyphoplasty**

Kyphoplasty is a well established technique for the treatment of vertebral compression fractures and the treatment of collapse due to metastatic spinal disease. Previously, cement was injected into the bone without creating a cavity initially – vertebroplasty – but this has increased risk of complications and so kyphoplasty is the preferred technique. There is increasing evidence showing the high efficacy of kyphoplasty in treating compression fractures from osteoporosis and the procedure has truly transformed the treatment of this potentially very disabling problem.

Under general anaesthetic, a balloon is inserted into the vertebral body under xray control and inflated and then deflated and removed. This creates a cavity into which cement is placed providing a strong scaffold for the previously collapsed painful vertebra. It is an extremely useful technique for treating compression fractures - particularly in the elderly – that are still symptomatic after 6-8 weeks. Of course, most of these fractures heal and a re symptom free, but in those that that are symptomatic the symptoms can be very disabling.

The procedure is minimally invasive (keyhole) and often done as a day case. More than one level can be done if indicated, but no more than 3 at one sitting.

If a tumour is suspected then a biopsy can be taken simultaneously. In the treatment of spinal tumours, kyphoplasty is for symptom control only and is not curative.

Besides the regular techniques used, increasingly kyphoplasty is used as an adjunct in more complex surgical procedures and the indications are widening. However, it should only be performed by those trained to do so with appropriate surgical skills available to remedy any potential complication that may arise.

Fortunately complications are rare, but do occur. Cement leakage out of the bone occurs in up to 9% of cases (cf. 40% in vertebroplasty) and this could potentially affect adjacent structures. This is however very rare indeed. Further problems include adjacent vertebral collapse and deep infection (approx. 0.5%).

The procedure has been extensively evaluated by the National Institute for Clinical Excellence (<http://www.nice.org.uk/ipcat.redirect?c=70182>).

On the Links page on this website under Medtronic– balloon kyphoplasty – excellent information and animations can be seen to explain the procedure further.