

# **PERCUTANEOUS VERTEBROPLASTY**

## *Information for patients*

### **Introduction**

- Vertebroplasty is the percutaneous injection of bone cement (polymethylmethacrylate or PMMA) into a fractured vertebral body.
- A painful vertebral fracture can be a significant burden for patients and their families. The procedure is to stabilize the spine, to increase mobility, and to relieve pain from symptomatic vertebral compression fractures caused by osteoporosis, metastases, or benign vascular tumor.
- Recent studies on percutaneous vertebroplasty reported the success rate in pain relief of approximately 70 – 90%. For patients without complication, the hospital stay is usually a few days.
- This procedure is performed by radiologists with special training in musculoskeletal interventional radiology in the Department of Radiology.

### **Procedure**

- X-ray film and computed tomography (CT) are taken to delineate the spinal structure before the procedure. Baseline neurological examination is also performed.
- Before the procedure, antibiotics will be given.
- You will lie facing downwards. The puncture site is located by fluoroscopy and a needle (2-3mm diameter) is inserted into the target bone after local anesthesia is given. A mixture of bone cement and radio-opaque substance (such as sterile barium particles) will then be injected slowly into the collapsed vertebral body under fluoroscopic guidance. Injection for pain relief will be given if you feel pain during the procedure.
- The procedure usually requires 1-2 hours (depending on the number of vertebra to be treated).
- After the procedure, your vital signs (e.g., blood pressure and pulse rate) will be monitored. You can resume diet if the vital signs are stable.

### **Potential Complications**

Reported significant complications are low (less than 10%), most of the complications are transient and minor.

#### Major complications

- Cement leakage lead to spinal cord compression (0.4%) and spinal nerve roots compression (1.7%), which may cause paraplegia or parasthesia, this may require emergency decompression surgery.
- Pulmonary embolism (0.2%).
- Infection (rare).

- The overall adverse reaction related to iodine-base contrast medium is below 0.7%. The mortality due to reaction to non-ionic contrast medium is below 1 in 250000.
- Death (very rare).

#### Minor complications

- Temporary pain exaggeration, fever (usually resolved within 24 hours).
- Radiculopathy (pain due to irritation of nerve roots) - <5% in osteoporotic fracture.
- Bleeding along the puncture site- rare.
- Rib fractures – rare.
- Hypertension.

### **Disclaimer**

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