

## Percutaneous Vertebroplasty in the Management of Osteoporotic Vertebral Compression Fractures: Initial Experience

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### Abstract

**Introduction:** Vertebral compression fractures related to osteoporosis may cause persistent pain which impairs mobility and reduces the quality of life. Percutaneous vertebroplasty is a therapeutic interventional radiology procedure which is used in the management of pain relief in such fractures. It involves the injection of bone cement [polymethylmethacrylate (PMMA)] into the collapsed vertebrae under radiological guidance. This provides pain relief as well as increases the strength and stability of the vertebra. **Materials and Methods:** A total of 16 patients with 17 osteoporotic compression fractures which were treated with percutaneous vertebroplasty over an 18-month period were studied. There were all women with the exception of 1 male patient. Their ages ranged from 61 to 87 years. The fracture sites were at the thoracolumbar junction from T12 to L3 levels. The majority of cases only required a unipedicular injection, with bipedicular injections in 3 cases. All cases were performed in the angiographic suite in the radiology departments, with biplanar fluoroscopy in one hospital. PMMA was injected in a semi-solid state under radiological guidance and screening into the collapsed vertebrae. **Results:** All cases showed good technical success with no mortality or major complications. Only 2 cases had minor complications of cement leakage into the soft tissues of the back and adjacent disc space, respectively. There was sufficient pain relief in all patients and they were well enough to be discharged within 1 to 5 days after the procedure. Patients were followed up to evaluate the degree of long-term pain relief as well as analgesic usage. **Conclusion:** Percutaneous vertebroplasty is a new and minimally-invasive modality of treating pain in patients with osteoporotic compression fractures who are refractory to medical therapy. Under adequate imaging guidance, the risks of complications are minimal while the potential benefit to patients and their care-givers are significant.

*Ann Acad Med Singapore 2002; 31:15-20*

**Key words:** Cement, Interventional radiology, Spine, Pain relief

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