

Percutaneous Vertebroplasty In Osteoporotic Compression Fractures

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Citation

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Abstract

Dear Editor,

A 45 M presented with back pain since 3 months, history of fall in bathroom 1 year back but did not have any bony injury and was ambulatory and pain free after 1 week of analgesics and rest. The pain became more severe on activity and movement and settled with rest. There is no radiation of pain to lower limbs. The patient is chronic alcoholic and has cirrhosis and admitted for liver transplant. On examination there is tenderness at L2 & L4. Movements are very painful and restricted, and there is no motor sensory deficit. Ct/X-ray shows compression fractures at L2 & L4 with intact posterior cortex at L4 and mild retro propulsion at L2 (Fig1a, b, c)

Figure 1

Figure 1a



Figure 2

Figure 1b

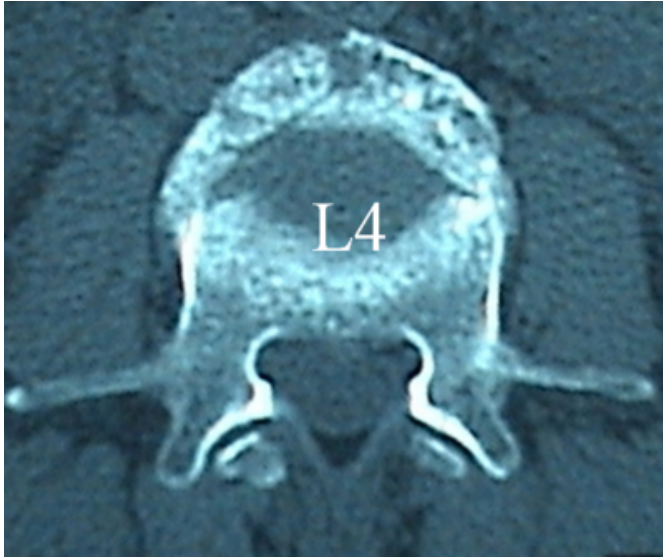
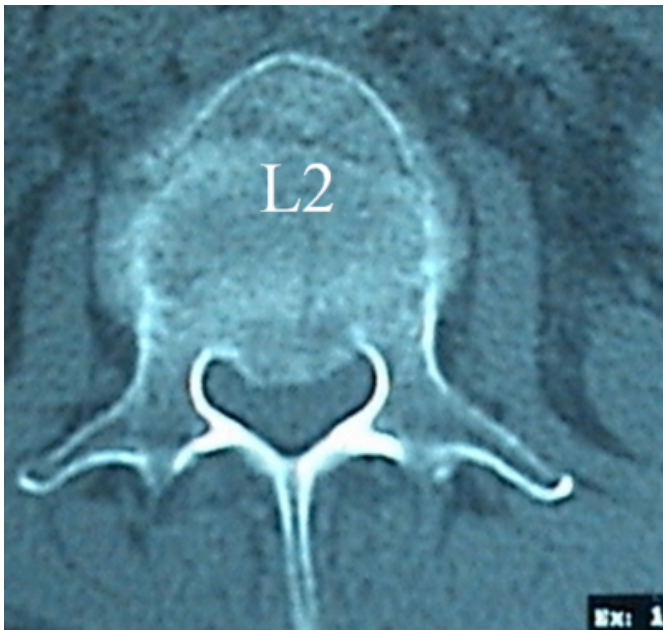


Figure 3

Figure 1c



PROCEDURE

Vertebroplasty is performed under local anaesthesia and mild sedation, but the patient is fasting and investigated so general anaesthesia could be given in case of any cement leak and need to explore the spine. He is prone over a pillow and is explained all the procedure. The back is cleaned and draped and prophylactic antibiotic is given, 2% Xylocain is injected into the skin and deep into periosteum of the pedicle of involved vertebra. Then using a hollow needle with trochar the pedicle is pierced and into body into junction of

middle 1/3rd and anterior 1/3rd (Fig 2a.), and the trochar is withdrawn (depending upon case to case a vertebrogram can be done to confirm the integrity of posterior wall). Similarly it can be performed in other pedicle or at different level (Fig 2b). Then low setting special vertebroplasty cement is mixed and injected into the needle under direct fluoroscopy control (Fig 2c). Normally upto 5 cc of cement is enough but varies from case to case. All the while while injected cement patients neurological status must be monitored. Patient is kept prone till cement hardens that is 15-20 min and can be ambulatory after 2 hours.

Figure 4

Figure 2a



Figure 5

Figure 2b

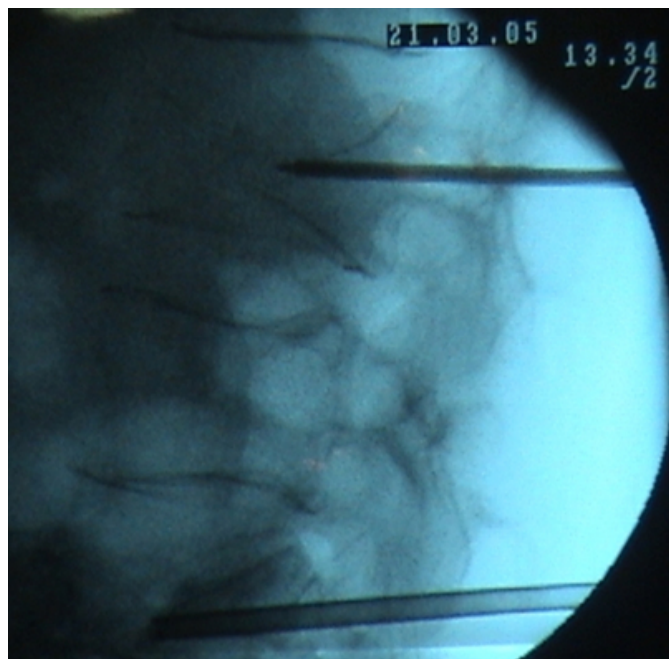


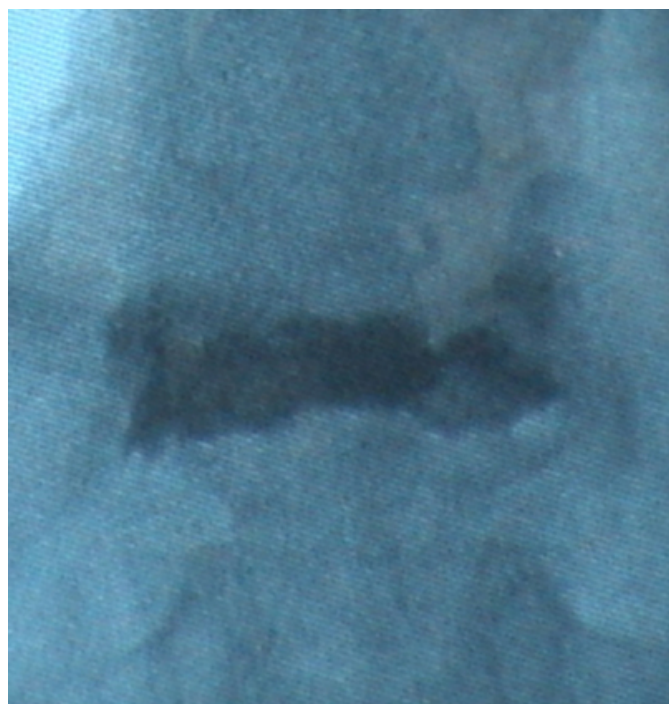
Figure 7

Figure 3a



Figure 6

Figure 2c



Post operative X-rays (Fig 3 a,b,c) shows cement filling most of the vertebral body at both the levels and patient was ambulated same evening

Figure 8

Figure 3b



Figure 9

Figure 3c



DISCUSSION

The term vertebroplasty refers to percutaneous (through the skin) structural reinforcement of the vertebral body using a special cement-like substance called “polymethylmethacrylate acrylic cement” (PMMA). Dr. Galibert initially pioneered this technique in France over a decade ago for the treatment of vertebral lesions (hemangioma). Over the past 21 years the indications have been expanded to include tumors of the spine that spread (e.g. cancer) and osteoporotic vertebral collapse. Despite a small number of studies in the literature and the lack of prospective randomized trials, this procedure has gained increasing acceptance particularly as a therapy to reduce symptoms associated with tumors (e.g. cancer) that have spread to the spine. One of the reasons for this has been the universal experience of prompt relief of pain in approximately 90% of patients treated using this method. We feel in technically sound hands this is good pain

relieving procedure even in patients unfit for major
stabilizing procedures or in fact even for general anesthesia.

References

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