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: 2000 3 2002 2  
108 108 ( 12 , 96 ; 42~84) 119 156  
system ( 3, 30, 90, 180 ) Visual analog scale (VAS 0~100 mm) McGill - Melzack scoring  
( , , ) 가 3  
: VAS McGill - Melzack scoring system 가 3  
가 26 가 57 (36.5%)  
: 가  
: 가

## Vertebroplasty for the Treatment of Painful Osteoporotic Compression Fractures

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**Introduction:** To evaluate results regarding pain relief, spinal stabilization, and complication after treatment with percutaneous vertebroplasty.

**Materials & Methods:** 108 patients (12 men, 96 women; aged 42~84 years) underwent 156 percutaneous injections of surgical cement into a vertebra (vertebroplasty) with fluoroscopic guidance in 119 procedures. All patients had severe pain, osteoporotic fractures and had failed medical therapy. Immediate and long-term pain response, spinal stability, and complications were evaluated. Assessment criteria were the changes over time (Days 3, 30, 90, 180) in visual analogue scale (VAS: 0~100 mm) and McGill-Melzack scoring system. The height of vertebral body was checked at three portions (anterior, middle, posterior) with lateral view of plain radiographs.

**Results:** A statistically significant decrease of both VAS and McGill-Melzack scoring system was observed at Day 3. The results were also significant at Days 30, 90, and 180 both scales. We observed no adverse event, but 26 vertebral fractures had occurred in the adjacent level during 12 months of follow-up. The leakage of cement was observed in 57 vertebral bodies (36.5%). But there was no neurological symptoms associated with cement leakage. The vertebral body height was increased after vertebroplasty.

**Conclusion:** Vertebroplasty is safe and effective, and have a useful role in the treatment of painful osteoporotic vertebral compression fractures that do not respond to conventional treatments. Continuous management of osteoporosis and patient education is mandatory to prevent subsequent fracture of the adjacent vertebral bodies.

**Key Words:** Osteoporotic vertebral compression fracture, Percutaneous vertebroplasty, Polymethylmethacrylate (PMMA)

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12.9 (12~30 )

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MRI

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Galibert 9)

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(visual analogue scale, 0~100 mm) VS (verbal scale, McGill-Melzack scoring system, 0=no pain, 1=mild pain, 2=troublesome pain, 3=severe pain, 4=very severe pain, 5=excruciating pain)<sup>15)</sup>

( 3, 90, 180, 360 )

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2002 2

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136

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12

가 가

108

SAS

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96 ;

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42~84 ,

67.4 )

119

156

가

-3.19 (-0.19 ~ -5.47)

( -3.35)

( -3.21)

가 49.1% 가

가 35.2%

가

8.4%,

6.5%,

0.8%

23

(

1

150 )

2

가

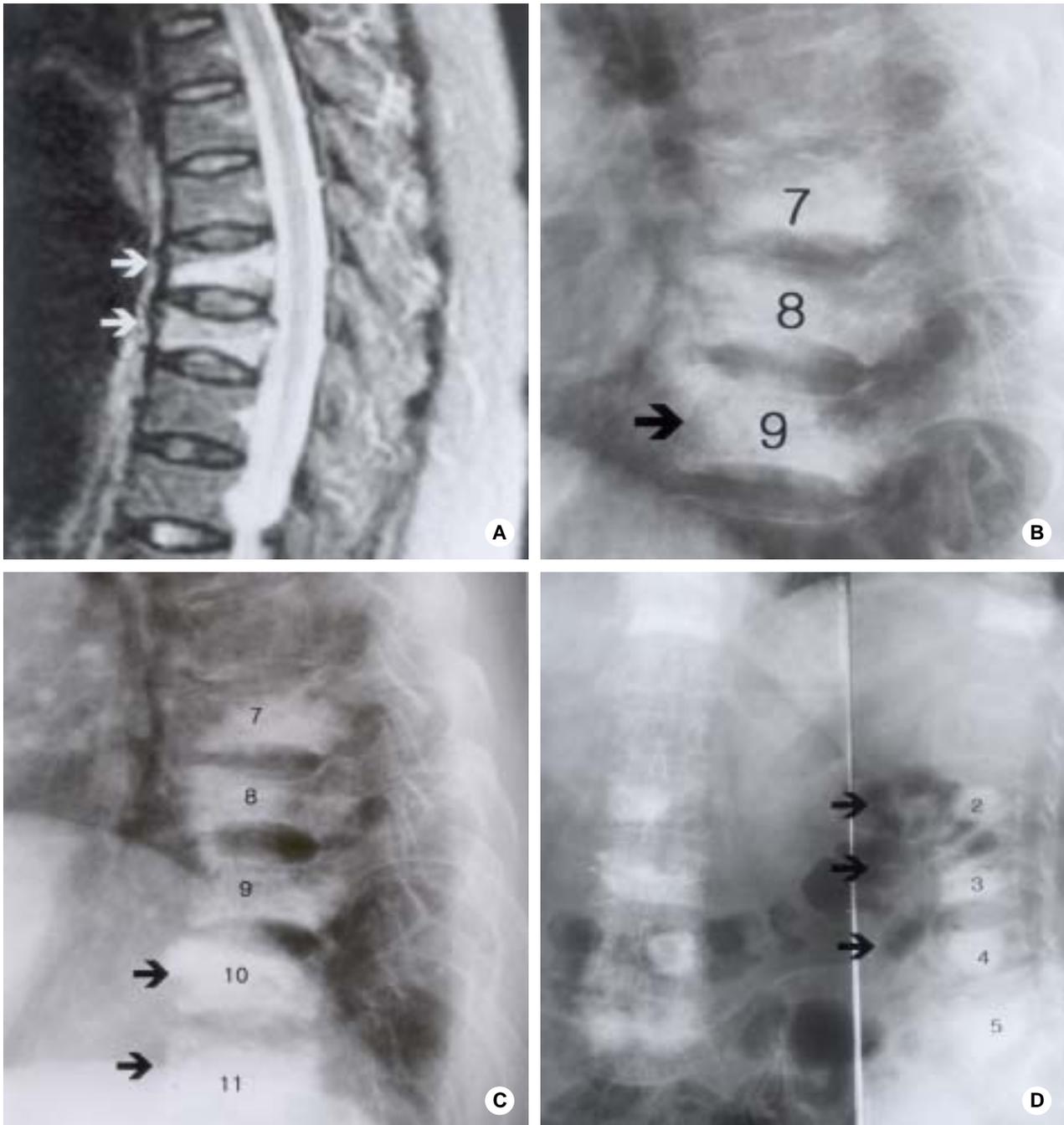
가 76

(48.7%),

가 80 (51.2%)

( 11





**Fig. 1A-D.** 63 years old female patient who received vertebroplasty in four times during three months. Her preoperative T-score (L1-4) was -4.00

- (A) Preoperative T-spine MRI showing recent compression fracture at T7 and T8
- (B) Additional fracture at T9 three days after the initial vertebroplasty.
- (C) New fractures at T10, T11 and L5 two months later the second vertebroplasty
- (D) Another compression fracture at L3 after five days from the third vertebroplasty  
The L2 and L4 are included for prevention

(unipedicular)

(bipedicular)

0~10%

9,10,18)

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