



## IMAGES OF SPINE CARE

### Severe vertebra collapse due to vertebra osteonecrosis after percutaneous vertebroplasty

A 70-year-old woman complained of 2-week history of severe back pain and restricted motion after a traffic accident. A magnetic resonance imaging of the lumbar spine showed a T12 compression fracture (Figure A) and severe osteoporosis (T score: -3.4); visual analogue scale (VAS) score was 9. Bilateral percutaneous vertebroplasty was performed and a total of 4.5 mL of polymethylmethacrylate (PMMA) bone cement was injected (Figure B,C). The patient was totally free of back pain, and the VAS score was improved to be 3 at 1 week after surgery. She received risedronate sodium (5 mg/day) and thoracolumbar hyperextension brace fixation for 1 month. However, on the 86th day after surgery, she complained of enhanced back pain without specific accident. A physical examination showed VAS score was 5, plain radiograph showed a T12 vertebra collapse and kyphoscoliosis (Figure D). Sagittal computed tomography (Figure E) and magnetic resonance imaging (Figure F) demonstrated a T12 intravertebral vacuum cleft sign, suggesting the possibility of a T12 vertebral osteonecrosis. We suggested percutaneous vertebroplasty for further treatment, but the patient refused.

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FDA device/drug status: Not applicable.

Author disclosures: **WW:** Nothing to disclose. **KD:** Nothing to disclose. **QuW:** Nothing to disclose. **QiW:** Nothing to disclose. **JL:** Nothing to disclose. **DH:** Nothing to disclose.

The authors declare that they have no financial or other conflicts of interest in relation to this research and its publication.

Dingjun Hao and Jijun Liu contributed equally to this work.

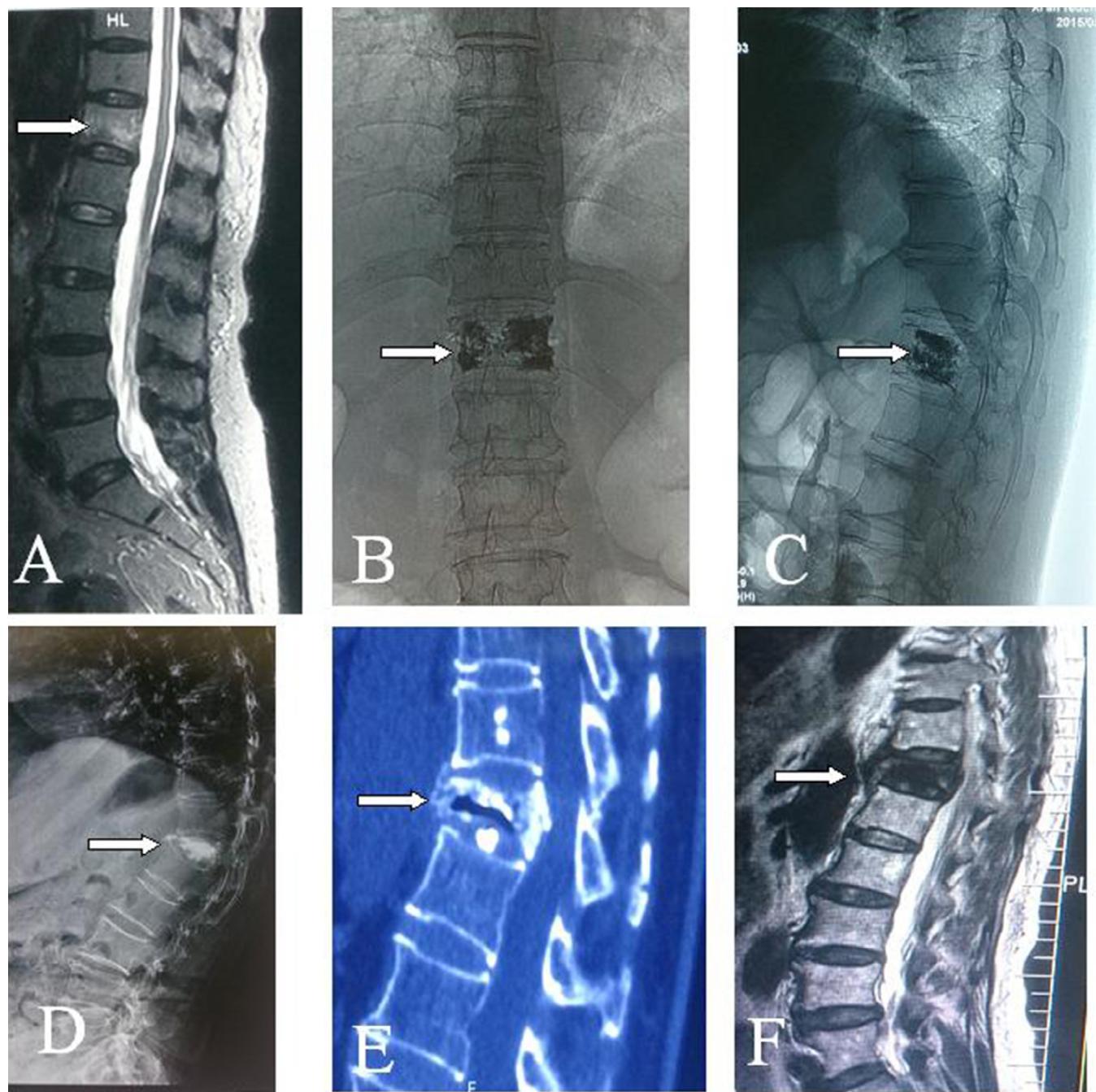


Figure. (A) MRI T2-weighted images showed high signal intensity on the T12 vertebra with compression (white arrow). (B–C) A total of 4.5 mL of polymethylmethacrylate (PMMA) bone cement was injected, and cement diffusion occurred evenly and was achieved end plate-to-end plate (white arrow). (D) Plain radiograph showed T12 vertebra collapse, with kyphosis angle of 45° (white arrow). (E) CT reconstruction shows the T12 vertebral body collapse with intravertebral vacuum (white arrow). (F) MRI T2-weighted images demonstrated low signal intensity on T12 (white arrow).