

## **Paraplegia due to pyogenic spondylodiscitis of the vertebrae with a traumatic compression fracture**

Yeo Hyung Kim<sup>1\*</sup>, Jung Soo Lee<sup>1</sup>, Yeonji Yoo<sup>1†</sup>

Uijeongbu St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Republic of Korea, Department of Rehabilitation Medicine<sup>1</sup>

### **Introduction**

Pyogenic spondylodiscitis is a bacterial infection of an intervertebral disc and its adjacent vertebrae. Although most patients with pyogenic spondylodiscitis have preceding events of invasive procedures such as epidural steroids and acupuncture, there are a few reports of primary hematogenous pyogenic infection of the intervertebral disc. We report a case of a patient who developed paraplegia as a complication of an infection of an intervertebral disc at the level of traumatic vertebral compression fracture.

### **Case description**

A 54-year old woman visited the emergency room due to multiple fractures after a traffic accident. She had been diagnosed with hypertension and rheumatoid arthritis with chronic steroid therapy for several years. Computed tomography scans and x-ray images revealed mandible and zygomaticomaxillary bone fracture, right 5,6,7th rib fracture, T5 and T10 vertebral compression fracture without any neurologic deficit. She had a fever on her initial visit day and methicillin-resistant *Staphylococcus aureus* (MRSA) was identified in blood and sputum samples. Despite targeted antibiotics therapy, MRSA bacteremia persisted for 1 month. At 1 month after the accident, she complained of left foot drop and an electrodiagnostic study showed left lower lumbosacral radiculopathy mainly involving L5-S1 nerve root. However, at 3 months after the accident (one month after the termination of the antibiotics), she had a fever again with the recurrence of MRSA bacteremia and clinically central line-associated infection was suspected. A few days later, she complained paralysis and hypoesthesia of bilateral lower extremities. She showed muscle weakness of Medical Research Council (MRC) grade 1 in the lower extremities. A thoracolumbar spine MRI showed pyogenic spondylodiscitis at T4-5 level with unstable bursting fracture and dislocation, resulting in cord compression and cord edema. Posterolateral fusion of T2-3-4-5-6-7 level was done by an orthopedic surgeon for spinal cord decompression and correcting the kyphotic change.

### **Conclusion**

Spinal cord compression can occur due to infection of the intervertebral disc and its adjacent vertebrae even after considerable time since the initial trauma. Patients who have predisposing factors such as prolonged MRSA septicemia and history of chronic steroid use can be more susceptible to hematogenous spinal infection.

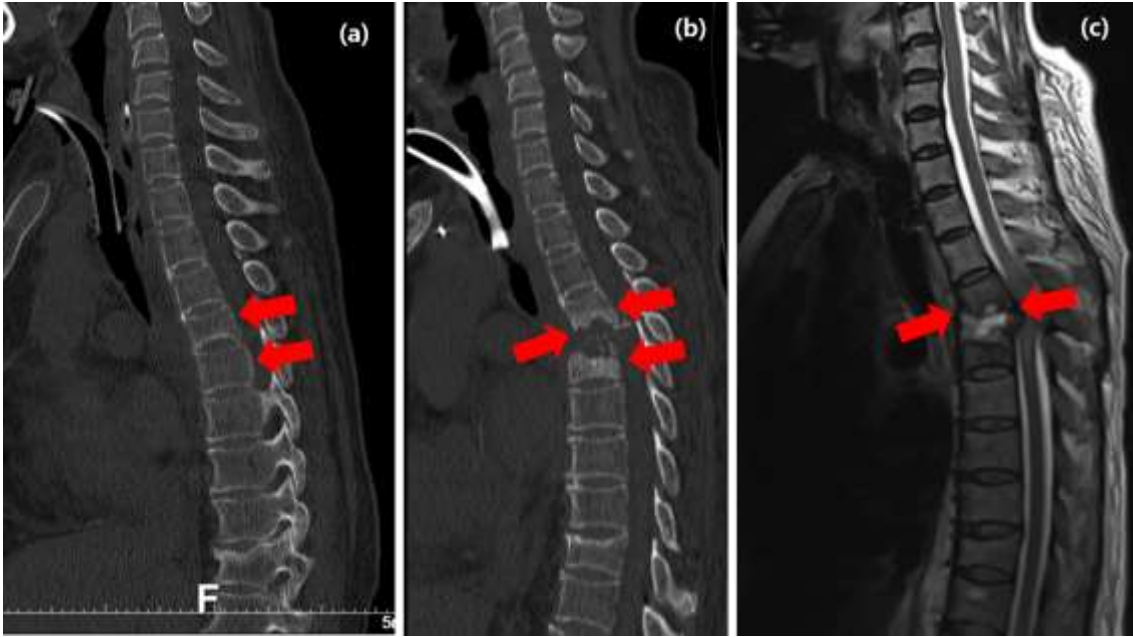


Fig 1. (a) Initial spine CT (b) Spine CT after 3 months (c) Spine MR after 3 months