

신경근육재활 및 전기진단

발표일시 및 장소 : 10 월 19 일(토) 14:20-14:30 Room C(5F)

### **OP3-3-3**

## **Electrodiagnosis of Upper Lumbar Stenosis: Discrepancy between Neurological and Structural Levels**

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### **Introduction**

Characteristics of radiculopathies caused by spinal stenosis at upper lumbar spinal canal (L1/2, L2/3, L3/4) have not been comprehensively investigated.

### **Methods**

A retrospective study reviewed 14 patients from a tertiary hospital outpatient clinic. Inclusion criteria were upper lumbar stenosis shown by MRI and radiculopathies with active denervation confirmed by electromyography. Patients combined with any other conditions that could explain clinical or electrophysiological manifestations were excluded.

### **Results**

Neuropathic findings were observed predominantly in L5 or S1 myotomes in electromyography. Abnormal spontaneous activities were observed in distal muscles in all patients, in proximal muscles in 8 patients. Axonal involvement was bilateral in 10 patients, unilateral in 4 patients. In MRI, redundant nerve roots were demonstrated in 13 patients with chronic reinnervation, except one whose onset was one month ago.

### **Conclusion**

Lumbar spinal stenosis at upper levels usually causes L5, S1 radiculopathies with diverse patterns. That level discrepancy may cause diagnostic confusion.

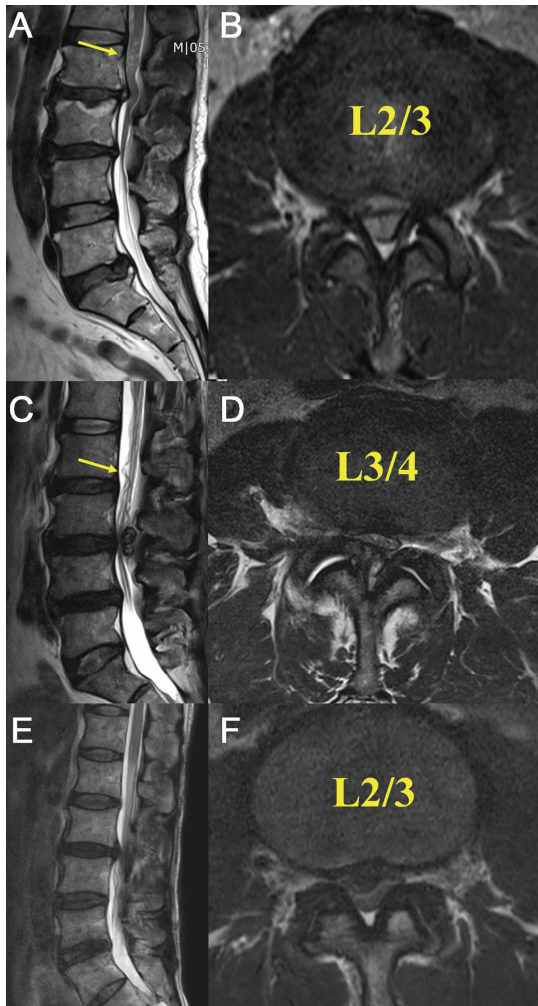


Figure 1. Sagittal and axial T2-weighted magnetic resonance images of illustrative cases. (A and B) a 53 year-old man with L5/S1 radiculopathy caused by L2/3 central canal stenosis, and evidence of RNRs (yellow arrow) (case 1). (C and D) a 63 year-old man with L5/S1 radiculopathy caused by L3/4 central canal stenosis due to bulging disc, facet arthropathy and synovial cyst, and evidence of redundant nerve roots (RNRs, yellow arrow) (case 2). (E and F) a 61 year-old man with left L5 radiculopathy caused by L2/3 herniated intervertebral disc (case 3).