

## **Spontaneous intraspinal hemorrhage: Three CASE REPORT**

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### **Introduction**

Spontaneous intraspinal hemorrhage is a rare condition that can be intramedullary, subarachnoid, subdural, or epidural. Because of its atypical and rarity symptoms varying from acute back pain to neurologic deficits, its prompt diagnosis is difficult. We report three cases of patients with spontaneous intraspinal hemorrhage with no traumatic injury. Case 1 A-93-year-old man experienced newly onset lower back pain with radiating pain in the L5 dermatome and no weakness. There was no history of recent trauma, and the use of anticoagulation drugs. MRI showed high signal intensity on T1WI and T2WI in the posterior subdural space at the T11-S2 level (Fig. 1). Based on these findings, a final diagnosis of spontaneous spinal subdural hematoma (SSDH) was made. Since he had no neurological deficit except pain, conservative management was chosen. At discharge, his symptoms were tolerable with pain medication. Case 2 A-81-year old man presented to the emergency department with acute onset radiating pain in the S1 sensory dermatome without history of trauma. On examination, he had a positive straight leg raise test on both side and no neurologic deficit. Lumbar spine MRI revealed a linear low to intermediate signal intensity mass, dorsal to the spinal cord, on both T1WI and T2WI at the L1-L2 level, and a fluid-fluid level of CSF space at the S1-S2 level. These lesions were enhanced (Fig. 2). As the imaging characteristics were suggestive of an idiopathic spinal subarachnoid hematoma (SSAH) and he was neurologically intact, he was treated with conservative therapies. A follow-up MR imaging study showed complete resolution of the SSAH at one month. Case 3 A-75-year old man presented with sudden onset both leg weakness and a numbness. Neurologic examination revealed motor weakness in lower limb (0-1/5 grade on both side). Impaired light touch sensation at both leg was noted. All reflexes were absent. Urinary retention was developed. Lumbar spine MRI and CT showed longitudinal epidural hematoma ranging from T11 to L2, which had clearly compressed conus medullaris (Fig. 3). Based on these findings, diagnosis of spontaneous spinal epidural hematoma (SSDH) was made. He underwent prompt surgical decompression and evacuation of the hematoma by hemi-laminectomy. Postoperatively, His proximal lower extremity strength improved (2-3/5 grade on both side).

### **Discussion**

The clinical presentations of intraspinal hemorrhage can mimic lumbosacral radiculopathy or degenerative thoracic myelopathy. These cases highlight the need to be aware of intraspinal hemorrhage as a potential source of presenting with lumbosacral radiculopathy or degenerative thoracic myelopathy and careful MRI interpretation should be performed for proper diagnosis.

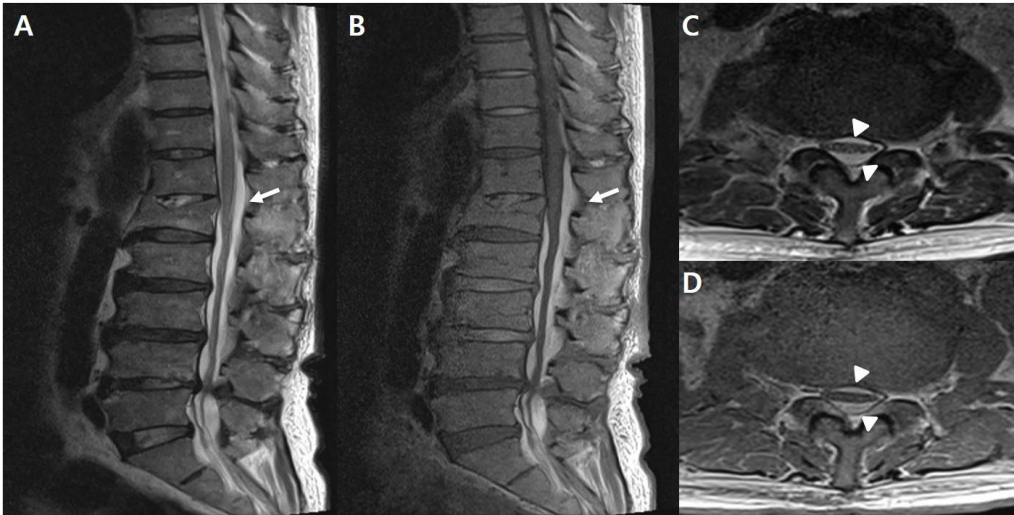


fig1. A linear high-signal intensity mass was showed in the posterior subdural space on T2-weighted (A) and T1-weighted (B) sagittal image at the T11-12 level (arrow). Axial T2WI (C) and T1WI (D) images showed high signal intensity mass (arrowhead) in ventral and dorsal to the spinal cord.

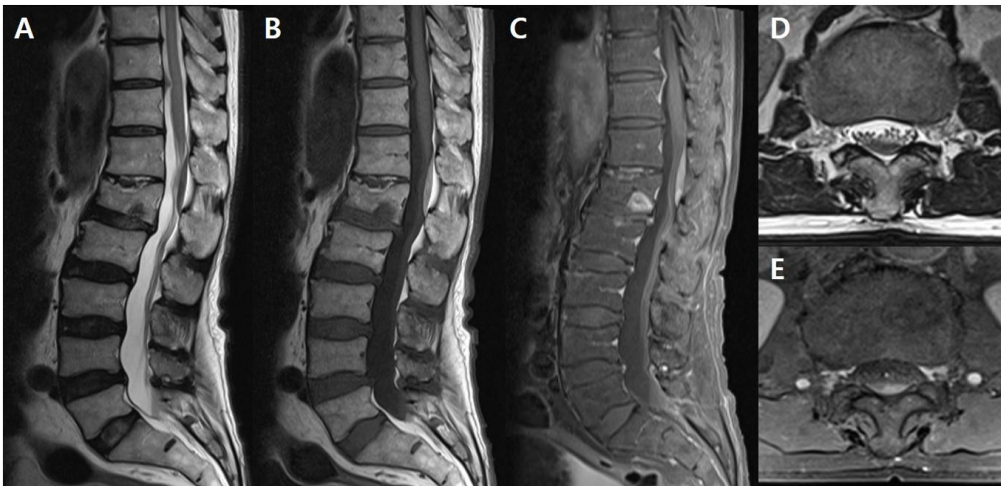


fig2. A linear low to intermediate signal intensity mass at the L1-L2 level with enhancement (arrow) and a Fluid-fluid level of CSF space at the S1-S2 level with enhancement (arrowhead) on T2-weighted (A,D) and T1-weighted (B) and enhanced T1-weighted (C,E) image.



fig3. T2-weighted (A,D) and T2-weighted images (B,E) showed longitudinal epidural hematoma ranging from T11 to L2, which had clearly compressed conus medullaris. Lumbar spine CT also demonstrated ill-defined longitudinal mass in the epidural space (black arrow)