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Spinal Subarachnoid Hemorrhage: Case Report

Spinal Subaraknoid Hemoraji: Olgu Sunumu

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Dear Editor,

A 70-year-old female patient was seen three days after hospitalization to the neurology ward with a transverse myelitis pre-diagnosis based on the spinal magnetic resonance imaging (MRI) performed in another center (Figure 1). Her symptoms of lumbar and back pain had initiated 5 days ago and then weakness in legs were added. The patient was admitted to our clinic after her clinical status worsened and diffuse spinal subdural hematoma and subtle spinal subarachnoid hemorrhage (SAH) between T1-T11 levels were detected in contrast-enhancing spinal MRI (Figure 2). In a neurologic examination, she was paraplegic, she had urinary and fecal incontinence, and deep tendon reflexes of lower extremities (patella and achilles reflexes) were decreased.

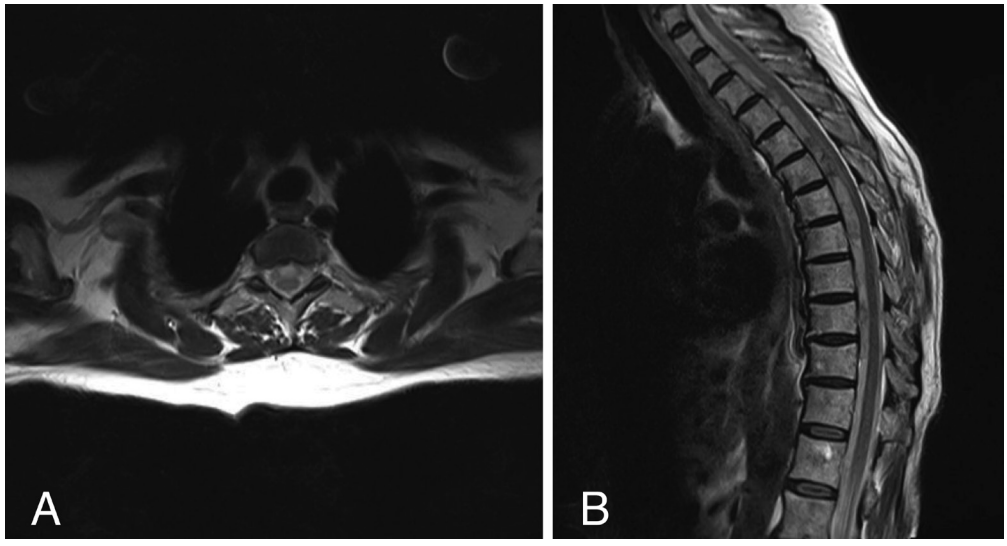

Figure 1. A, B) Heterogeneous, hypo, and hyperintense lesion between T1-T11 levels in thoracal spinal magnetic resonance imaging

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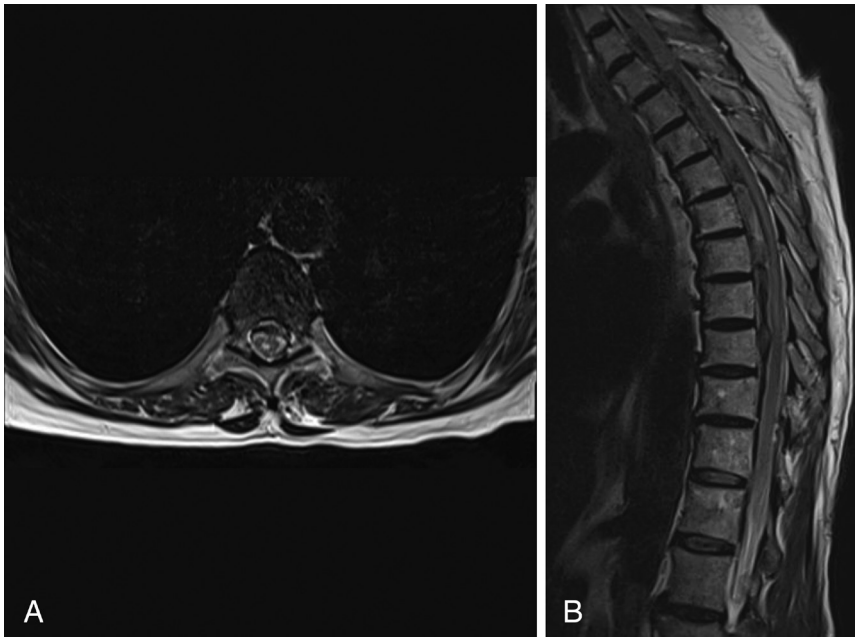

Figure 2. A, B) Minimal contrast-enhancing lesion suggesting spinal epidural and subarachnoid hemorrhage between T1-T11 levels in thoracal spinal magnetic resonance imaging

No laboratory abnormalities were found. She was using warfarin irregularly for prior venous thrombosis of right lower extremity.

Emergency surgery was planned for the patient who had severe neurologic deficit. Laminectomy was performed at levels T1, T3, T5, T6, and T9, which were the most prominent areas of compression in accordance with localization of the lesion. In the operation, medulla spinalis was observed as tense, edematous, and ecchymotic. The dura was opened at level T5-6 and the hematoma was removed from the intradural region of the suspected area of bleeding. The medulla spinalis was observed as ecchymotic suggesting SAH (Figure 3). After the operation, there was no improvement in the neurologic deficit of the patient. On the second postoperative day, the patient was intubated due to difficulty in breathing and was transfered to the intensive care unit. On the 23rd day of hospitalization, the patient died of respiratory failure.

Spinal hematomas are very rare and rapidly progressive disorders that cause permanent neurologic damage and death if not diagnosed and treated early. Its frequency is 1% among space-occupying lesions in spinal space (1). Coagulopathy, hypertension, anticoagulant or antiaggregant drug use, pregnancy, vessel abnormalities, and conditions causing and increase in intratorasic or intraabdominal pressure may be considered as causes of bleeding in patients with spinal hematoma (2,3). The first symptom in patients is usually pain. Typically, the pain is sudden onset, severe, and localized. Neurologic deficits are seen shortly after the pain due to compression on the spinal cord. Acute ruptured herniated disc, epidural mass, transverse myelitis, spondylitis, Guillain-Barré syndrome, epidural abscess, epidural SAH, vertebral fracture, and aortic dissection should be considered in the differential diagnosis in patients with neurologic deficits and pain (4). MRI is the gold standard imaging method in the diagnosis of spinal hematoma, which is isointense in the first 24 hours of bleeding and

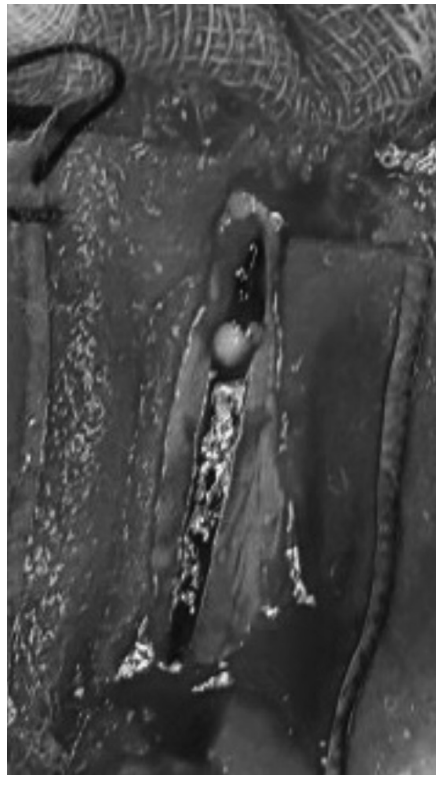

Figure 3. Edematous and ecchymotic appearance of spinal cord suggesting subarachnoid hemorrhage after dura was opened in surgery

is hyperintense 24-36 hours after bleeding in T1-weighted images (5). In patients with spinal hematoma, surgical intervention should be performed with the aim of decompression as soon as possible,

and the hematoma should be drained away to remove the pressure on the spinal cord. Preoperative neurologic deficit and the level of hematoma are significantly associated with early and long-term functional outcomes, despite rapid decompression. In our case, surgery was performed approximately five days after the onset of symptoms and no improvement in neurologic deficit was observed in the postoperative period. As a result, if a patient receives anticoagulant therapy and develops paraparesis or paraplegia following sudden-onset back pain, the possibility of spinal hematoma should be considered. In patients with suspected spinal hematoma, MRI is the preferred imaging method and should be performed without delay to confirm the diagnosis. If there is no early spontaneous recovery, emergency surgical evacuation of the hematoma gives patients the best chance of recovery.

Ethics

Informed Consent: Written informed consent was taken from the parents for reporting this case.

Peer-review: Internally peer-reviewed.

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