Simultaneous spinal and intracranial chronic subdural hematoma

Case illustration

KLAUS A. LEBER, M.D., GERHARD PENDL, M.D., SONJA KOGLER, M.D., FRITZ KAMMERHUBER, M.D., AND FRANZ EBNER, M.D.
Departments of Neurosurgery and Radiology, Karl-Franzens-University, School of Medicine, Graz, Austria

We describe a combined chronic intracranial and chronic spinal subdural hematoma (SSDH) following minor trauma in a 54-year-old man. Initially, the patient slipped on ice, falling on his back and occiput. Three weeks later he experienced an episode of acute low-back pain and increasing bitemporal headache. A computerized tomography scan displayed a small bihemispherical chronic SDH. This lesion was treated conservatively; however, the level of low-back pain fluctuated and was resistant to medical treatment. The patient developed progressive compression of the cauda equina. Magnetic resonance (MR) imaging revealed a sharply defined mass lesion filling the entire dural sac and compromising the cauda equina ventrally and dorsally (Fig. 1); this was consistent with a chronic SDH. Progressive symptoms led to surgical evacuation. Surgical and histopathological findings confirmed the diagnosis. The patient recovered completely, and 6-month follow-up MR imaging showed no residual or recurrent spinal hematoma (Fig. 2).

Chronic SSDH is a very rare entity among spinal hematomas. Approximately 15 cases have been reported in the literature. Anticoagulant therapy, blood dyscrasias, trauma, vascular malformations, lumbar puncture, and surgery have been proposed as causative factors, and spontaneous cases have been described as well. Symptons are often uncharacteristic and can be misleading. Myelography has been supplanted by MR imaging as the method of choice to study spinal hematomas to determine their extent and to distinguish between intradural and extradural blood. The pathogenic mechanism of SSDH is still unclear. Unlike its intracranial counterpart, the spinal subdural space lacks vessels of sufficient size to be the source of the bleeding.

Our case, documented by radiological, surgical, and histopathological findings, suggests that SSDH is a venous hemorrhage that can maintain a chronic course similar to that of intracranial SDHs. Chronic SSDH has been considered to have an uncertain prognosis; however, good results can be expected with early diagnosis and prompt treatment.

References

Fig. 1. Left: Sagittal T1-weighted MR image showing the extent of the hyperintense hematoma. Right: Axial T1-weighted MR image obtained at L4–S demonstrating the hematoma, the compromised cauda equina (half-moon shaped), and epidural fatty tissue.

Fig. 2. Sagittal (left) and axial (right) T1-weighted MR images obtained 6 months after evacuation of the hematoma.