Lumbosacral subdural hematoma following a ruptured aneurysmal subarachnoid hemorrhage

Sir,

A 62-year-old man was admitted to the neurosurgery department for sudden onset headache. Computerized tomography (CT) scan showed a subarachnoid hemorrhage (SAH). Cerebral angiography demonstrated a right posterior communicating artery aneurysm. He underwent aneurysmal neck clipping on the onset day. A cisternal drainage catheter was placed in the sylvian cistern. Cerebrospinal fluid was drained in the amount of 250ml per day for seven days after surgery. Fasudil hydrochloride hydrate was given as the prevention of cerebral vasospasm for 14 days after surgery. Laboratory data, including coagulability, were normal. There was no trauma to his spinal canal during the operation and the perioperative period. Two days after surgery, he showed left lower extremity paresis with low back pain radiating to the left lower extremity. The straight leg raising test was positive on the left side at 40 degrees. On the left side, he had 4/5 muscles strength in quadriceps, 3/5 muscles strength in extensor hallucis longus and gastrocnemius. Sensory examination and sphincteric functions were normal. Babinski sign was negative. Magnetic resonance image (MRI) of the lumbosacral spine was obtained to evaluate for possible disc herniation. Sagittal T1-weighted images showed abnormal tapering intermediate and high signals in the spinal canal from L4 to S2 level caudally. Sagittal T2-weighted images showed slightly high signals [Figure 1]. These findings were interpreted as indicating a subacute subdural hematoma (SDH). To determine the origin of bleeding, selective spinal angiography was performed. But there was no evidence of a spinal vascular malformation. Surgical evacuation of the hematoma was not performed because his motor functions were showing some improvement already after a few days. The time and extent of improvement, whether he suffered side-effects and the time required for complete disappearance of symptoms in patient with no side-effects. A repeat MRI study of the spine was obtained six months later, which showed almost no hematoma. At that time, he had recovered completely.

The spontaneous SDH could result from SAH. A report points out simultaneous SDH and SAH.[1] If the clot is large, it could rupture through the arachnoid into the subdural space.[2] Low cerebrospinal fluid pressure caused by postoperative cisternal drainage could make the SDH easy through the arachnoid. It could be easy to consider as a cause of the spinal SDH in our case.

The characteristic MRI finding for lumbosacral SDH is subdural blood along the dural sack. The subdural blood continues from the lumbar vertebral body level to the bottom edge of the dural sack.

Our patient recovered completely after non-surgical treatment. Conservative management could be an option in cases with rapid resolution of the neurological deficit.

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References

Accepted on 19-02-2007