Chronic spontaneous spinal epidural hematoma

Report of two cases

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Two cases of spontaneous chronic spinal epidural hematoma are reported. Epidural hematoma in the region of the spinal cord produces dramatic signs of cord compression leading to early diagnosis and treatment, while epidural hemorrhage in the region of the cauda equina is insidious in its onset and tends to become chronic before definitive treatment is undertaken.

KEY WORDS - spinal cord - epidural hematoma

The manifestations of acute epidural spinal hemorrhage are generally catastrophic, resulting in paraparesis, paraplegia, triplegia, or quadriplegia in minutes to hours. Most frequently the bleeding is due to trauma or to anticoagulant therapy, occasionally to other coagulation defects or sepsis, and rarely it may be idiopathic and spontaneous. Chronic spontaneous epidural spinal hematoma is even less common. It appears below the level of the spinal cord and may simulate herniated intervertebral disc or tumor involving the cauda equina.

Case Reports

Case 1
A 66-year-old retired maintenance man was in good health until 7 months before admission when he became aware of pain in his left hip, thigh, and calf after putting up kitchen cabinets. The pain was associated with a tingling sensation in the left thigh, especially with changes in position. The leg pain was aggravated by coughing and sneezing. He was not on anticoagulant therapy and took no medications except for pain.

Examination. The patient walked with a slight limp favoring the left leg. There was no limitation to movement of the spine and no spasm of the back muscles. Straight leg raising was accomplished to 90° and there was no atrophy or weakness in either leg. There was slight hypalgesia of the lateral side of the left foot and the knee and ankle reflexes were absent bilaterally. X-ray films of the lumbar spine showed osteophytic spurring. A myelogram revealed a posterolateral defect at L4-L5 on the right and a larger lateral defect at L5-S1 on the left (Fig. 1).

Operation. A partial hemilaminectomy was performed at L-4 and L-5. The L-5 and S-1 roots on the left were found to be tightly compressed by an encapsulated mass which proved to be an organized hematoma and was removed. The intervertebral discs at both levels were normal.

The postoperative course was uneventful, and the pain was completely relieved.

Case 2
A 75-year-old woman was admitted to St.
Joseph Hospital on July 6, 1970, with a chief complaint of pain in the left hip and lower back of 6 months' duration. There was no history of trauma. She had not improved with conservative measures and in the weeks before admission had experienced pain in the right leg as well. The pain was not made worse by coughing or sneezing but definitely increased while walking. She was free of pain in bed.

**Examination.** The patient walked with a slight limp favoring the left leg. Forward bending was well performed, but neck flexion increased the back pain. There was no weakness of the legs. The knee and ankle reflexes were depressed and equal. A stocking-like sensory loss was noted in both legs, more pronounced on the left. Position and vibratory sensations were normal. Straight leg raising was slightly limited on the left, but the sciatic stretch test was negative bilaterally. Percussion of the lumbar spine was painful without radiation into the legs, but the patient had tenderness in the left buttoc. X-ray films of the lumbar spine showed osteophytic spurring and disc narrowing at L4-L5. The hip joints were normal. A lumbar myelogram demonstrated a posterior defect at the L3-L4 level, chiefly on the left (Fig. 2).

**Operation.** At laminectomy on August 11, a thick, black fibrotic mass was found at the level of the third and fourth lumbar vertebræ. The mass lay posteriorly to the left and was adherent to the dura. It proved to be an organized hematoma (Fig. 3).

The patient was free of pain postoperatively.

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**Fig. 1. Case 1.** Myelograms showing an epidural mass compressing the left nerve root at L5-S1 and obliterating its sheath. Although the appearance is consistent with an extruded disc, this proved to be an organized chronic hematoma for which no antecedent cause could be determined.
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Fig. 2. Case 2. Myelograms demonstrating a large posterolateral epidural defect at the L4-L5 interspace on the left. The appearance is atypical for extruded intervertebral disc, and there is no evidence of bone destruction to suggest malignant neoplasm nor of disc destruction to indicate septic spondylitis. This proved to be an encapsulated chronic idiopathic epidural hematoma.

Fig. 3. Case 2. Photomicrograph demonstrating old organized blood clot with hemosiderin pigment and fibroblast infiltration. H & E × 800.

Discussion

Spinal epidural hematoma may occur in association with vertebral fractures, in blood dyscrasias such as hemophilia and leukemia, with toxic febrile illnesses as well as with anticoagulant therapy.\(^1\) Spontaneous spinal epidural hematomas also occur but are extremely rare, and only 50 cases have been reported in the 100 years between 1869 and 1969.\(^2\) Six of these patients were found to have encapsulated hematomas at the time of surgery, but this was related to delay in operative intervention rather than to chronic symptoms. Harris’s patient\(^4\) and our two cases are the only examples of chronic spontaneous hematoma, and all three occurred in the region of the cauda equina, simulating disc or tumor. An additional case of chronic lumbar extradural hematoma simulating protruded disc syndrome has been reported by Svien and associates\(^6\) but was preceded by trauma when the patient slipped and fell on the ice several weeks before.

A spontaneous hematoma at the level of the spinal cord evokes dramatic signs and symptoms usually beginning with localized and then radicular pain, progressing to paralysis within minutes, hours, or days.

Hematomas below the level of the conus medullaris are more likely to be chronic because the spinal roots appear to tolerate pressure better than the spinal cord and its arteries.

References


Received for publication December 31, 1970.
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