



A Case of Spontaneous Spinal Epidural Hematoma Mimicking Stroke

Serebral İnmeyi Taklit Eden Spontan Spinal Epidural Hematom Olgusu

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Summary

Spontaneous spinal epidural hematoma is an uncommon cause of acute non-traumatic myelopathy and may present with various clinical phenotypes. It should be included in the differential diagnosis of the patients who have focal neurological findings suggestive of stroke. Therefore, a thorough documentation of patient history is of great importance, since this can reveal symptoms suggestive of a different etiology. Here, we present a case of a 80-year-old female who was admitted with hemiparesis without cortical or cranial neurological abnormalities. She described pre-existing shoulder and neck pain. Diagnosis of epidural hematoma was made by cervical magnetic resonance imaging. Symptoms resolved partially after surgical intervention. Our case illustrates the variation in the clinical presentations of spontaneous spinal epidural hematoma which can be misdiagnosed as stroke. Therefore, in patients with preceding neck, shoulder or interscapular pain and focal neurological deficits, this diagnosis should be included in the differential diagnosis, particularly in the absence of cortical and cranial symptoms. (Turkish Journal of Neurology 2014; 20:95-97)

Key Words: Spontaneous spinal epidural hematoma, stroke, neck pain, Lhermitte's sign

Özet

Spontan spinal epidural hematom, travmatik olmayan miyelopatinin nadir bir sebebi olup farklı klinik bulgular ile baş gösterebilmektedir. Fokal nörolojik bulguları olan ve serebral inme olarak değerlendirilen hastalarda ayırıcı tanıda özellikle göz önünde bulundurulmalıdır. Farklı etiyojilere işaret eden klinik bulguları ortaya koymak için anamnezin iyi bir şekilde değerlendirilmesi büyük önem taşır. Bu yazıda sol kol ve bacadaki ani olarak gelişen güçsüzlük, ense ve omuz ağrısı şikayeti olan, kortikal ve kraniyal sinir tutulumu bulgusu saptanmayan 80 yaşındaki bir kadın hasta sunulmuştur. Hastaya klinik bulguları eşliğinde yapılan servikal manyetik rezonans görüntüleme sonrasında spinal epidural hematom tanısı konuldu. Cerrahi müdahale sonrasında hastanın şikayetlerinde kısmi düzelme izlendi. Spontan spinal epidural hematom farklı klinik bulgular ile seyredebileceğinden yanlışlıkla serebral inme tanısı alabilmektedir. Bu sebeple ense, boyun, sırt ağrısı ve fokal nörolojik bulgu ile gelen hastalarda özellikle kortikal ve kraniyal bulguların yokluğunda spontan spinal epidural hematom ayırıcı tanıda mutlaka akla getirilmelidir. (Türk Nöroloji Dergisi 2014; 20:95-97)

Anahtar Kelimeler: Spontan spinal epidural hematom, inme, boyun ağrısı, Lhermitte's bulgusu

Introduction

Spontaneous spinal epidural hematoma (SSEH) is a very rare condition but an important cause of spinal cord compression. The common presentation of SSEH is an acute onset of severe, radiating back pain followed by paralysis or symptoms of rapidly evolving nerve root and spinal cord compression. The majority of hematomas occur in the dorsal thoracic area (1,2). Early diagnosis and management is important for a favorable prognosis. Here, we report a patient who developed spontaneous cervical epidural hematoma presenting with clinical signs of stroke.

Case

An 80-year-old female patient was referred to our emergency room with a sudden onset of severe shoulder and neck pain, and weakness in her left side starting afterwards. Her complaints began one hour after waking up and her pain was resistant to non-steroidal anti-inflammatory drugs. The patient's medical history revealed that she had hypertension that was under medical control. There was no previous history of anticoagulant, antiaggregant therapy or coagulopathy. No recent trauma was noted. The initial diagnosis was cerebrovascular disease, although she did not report any facial symptoms or have contralateral sensory symptoms. Her initial blood pressure was 180/100 mmHg. On neurologic examination the patient was fully oriented, cooperative, pupils were isocoric and reactive bilaterally, cranial nerves were intact; her speech was normal. The motor examination revealed 3/5 strength in the upper left extremity and 2/5 strength in the lower left extremity. Sensation was decreased on the right side with a C3 sensory level. Temperature perception was normal in both right and left sides. The examination of the neck back was unremarkable. When the patient had flexed her head forward, sudden, transient electric-like shocks traveled down the spine. Bladder and bowel function were impaired, she had urinary incontinence and diarrhea. The patient's hematological examinations were within normal limits: prothrombin time (12 sec, N:10-14 sec), bleeding time (6 min, N:4-10 min), partial thromboplastin time (30 sec, N:25-35 sec) and platelet count ($207.103/mm^3$, N:150-400.103/mm³) was in normal ranges. A computerized tomography (CT) scan of the brain revealed hypodense areas in the right centrum semiovale, left corona radiata and left parietal subcortical white matter, which pointed out to chronic ischemic gliotic lesions. There were no acute lesions. The patient's brain diffusion magnetic resonance imaging (MRI) and cervical MRI revealed a cervical spontaneous epidural hematoma without diffusion restriction.

She was initially thought to have suffered a right cerebral hemisphere stroke due to cervical artery dissection. The Doppler and CT angiography of the cervical arteries revealed no dissection. A CT scan of the brain was normal. Cervical MRI revealed a cervical epidural hematoma extending from C3 to C6 (Figures 1, 2). The hematoma's appearance seemed to be of recent onset and caused expansion and edema in the spinal cord. A formal spinal angiogram was not performed. The histopathological study showed recent blood clot consistent with hematoma undergoing early resorption. The patient underwent extensive hematological investigations, but no clotting abnormalities were detected. Postoperatively, in the next 12 hours the patient gained her motor

function back to 4/5 in the left upper extremity but no change was seen in the motor functions of the left lower extremity. She was discharged from the hospital with partial recovery.

Discussion

Spinal epidural hematoma mostly follows an acute course, although a chronic course has also been reported in the literature (2). The spontaneous development of epidural hematomas is most frequent after the fourth decade (3). Patients with spontaneous spinal extradural hematoma usually present with



Figure 1. Sagittal T1-weighted image shows isointense epidural lesion.



Figure 2. Epidural hematoma was determined in T2-weighted cervical spinal MRI.

rapidly progressing neurological deficits without any history of preceding trauma. Spontaneous spinal epidural hematoma is rare and the incidence is 1 case per 1.000.000 (4). The most preferable investigation is non-contrast MR imaging, which can detect even small amounts of blood in the spinal canal. During the acute stage, hematomas look isointense in T1-weighted images and hyperintense relative to spinal cord in T2-weighted images (5). SSEH has been associated with anticoagulant and antiaggregant drug therapies, vascular malformations, infections, neoplasms, minor vertebral traumas, iatrogenic procedures, coagulopathy as it can be spontaneous as well. Computed tomography can be useful to rule out lesions of the bone (6). SSEH is an unusual but important neurological emergency. Precipitating factors include anticoagulant therapy, therapeutic thrombolysis, hemophilia, long-time aspirin use, cocaine abuse, vascular malformations, and Paget disease. However, idiopathic cases account for approximately 40% of cases (7,8). In the current case, a thorough investigation for the possible risk factors was performed.

The majority of hematomas occur in the dorsal thoracic area. Cervical hematomas and rapid development of deficits indicate a poor prognosis (9). The treatment for SSEH is prompt surgical intervention. The postoperative recovery from SSEH depends, predominantly, on the interval between symptom onset and surgical decompression (10). Previous studies have shown that early diagnosis and surgery within 12 hours correlated with a better neurological outcome. A more conservative treatment may be considered in patients with rapid clinical improvement (11). In our case, due to the clinical manifestations include acute onset hemiparesis, initial diagnosis was cerebral stroke caused by cervical artery dissection. In this case, a positive Lhermitte's sign, neck pain, hemiparesis without any hemispheric finding or cranial nerve sign, and a negative brain diffusion MRI guided us in localizing the hematoma in the cervical spine extending from C3 to C6. Sphincter disorders may develop in some cases (12). Surgical treatment was completed in 24 hours and we obtained significant improvement.

We reported a case of spontaneous epidural hematoma mimicking stroke. The importance of this case is that this

condition is very rare but a life-threatening clinical condition. Rapid diagnosis and surgery should be performed as soon as possible for a better prognosis. Physicians should be aware of this uncommon presentation (hemiparesis without any hemispheric finding or cranial nerve involvement) and include SSEH in the differential diagnosis.

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