J Anesth (2012) 26:949–950
DOI 10.1007/s00540-012-1444-0

LETTER TO THE EDITOR

Unilateral sensorimotor deficit caused by delayed lumbar epidural hematoma in a parturient after cesarean section under epidural anesthesia

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Received: 13 April 2012 / Accepted: 19 June 2012 / Published online: 13 July 2012

Keywords Epidural hematoma · Cesarean section · Pregnancy · Epidural anesthesia

To the Editor:

A 24-year-old parturient (weight 65 kg, height 160 cm) was scheduled for cesarean section under epidural anesthesia because of fetal breech position. The patient was healthy and was not taking any anticoagulatory drugs. Her preoperative platelet count, prothrombin time (PT), and activated partial thromboplastin time (aPTT) values were normal. The epidural anesthesia was performed in the midline of the L1–2 interspace. A flexible catheter (SCW MEDICATH LTD, Shenzhen, China) was passed cephalically to a distance 4 cm beyond the tip of the needle. Aspiration through the catheter failed to yield blood or fluid. A test dose with 5 ml of 2 % lidocaine was administered. After 5 min, 12 ml of 2 % lidocaine was given for epidural anesthesia. The process of lumbar puncture and cesarean section was smooth and successful. The operation was finished within 1 h. Total estimated blood loss was 300 ml; 500 ml Gelofusine and 500 ml Ringer solution were administered. The epidural catheter was withdrawn after surgery.

Motor and sensory functions in both lower limbs recovered from the neuraxial block and the patient did not feel any abnormalities after 4 h. The next day in the morning she complained that she was unable to move her right thigh, but had no back pain. Physical examination showed that pain sensation, motor function, and deep tendon reflexes were lost in the right lower limb, while these parameters were normal in the left lower limb. Magnetic resonance imaging revealed an acute epidural hematoma at the L1–2 level, and the intervertebral foramen and lateral recess at the right side had become stenosed (Fig. 1). Emergent laminectomy was performed for hematoma evacuation and decompression of the epidural space. Three months after the laminectomy, her motor and sensory functions had fully recovered.

Spinal epidural hematoma is reported to be a rare complication in obstetric patients with neuraxial anesthesia [1]. Because of its various manifestations, spinal epidural hematoma cannot be diagnosed immediately [2]. Different from the risk factors in previous reports of spontaneous or delayed-onset epidural hematoma [3–5], the present patient did not have such risk factors, nor did she suffer from major bleeding. She developed the epidural hematoma symptoms after her motor and sensory function had recovered from neuraxial anesthesia. Her main symptom was numbness and progressive weakness in the unilateral lower limb, without back pain.

A possible reason for the spinal epidural hematoma in our patient could be that pregnancy is a risk factor for such an occurrence. Although pregnancy is characterized by a relatively hypercoagulable state, pregnancy leads to a rise in the epidural venous pressure, which then increases the possibility of damage to the epidural vein. In our patient, the epidural venous plexus might have been injured during the insertion or removal of the epidural needle and catheter. We note that negative aspiration does not absolutely rule out vessel injury. In a parturient, the usefulness of adding epinephrine to the test dose of lidocaine to determine intravenous and intrathecal catheterization seems to be controversial. Because epidural bleeding that is caused by

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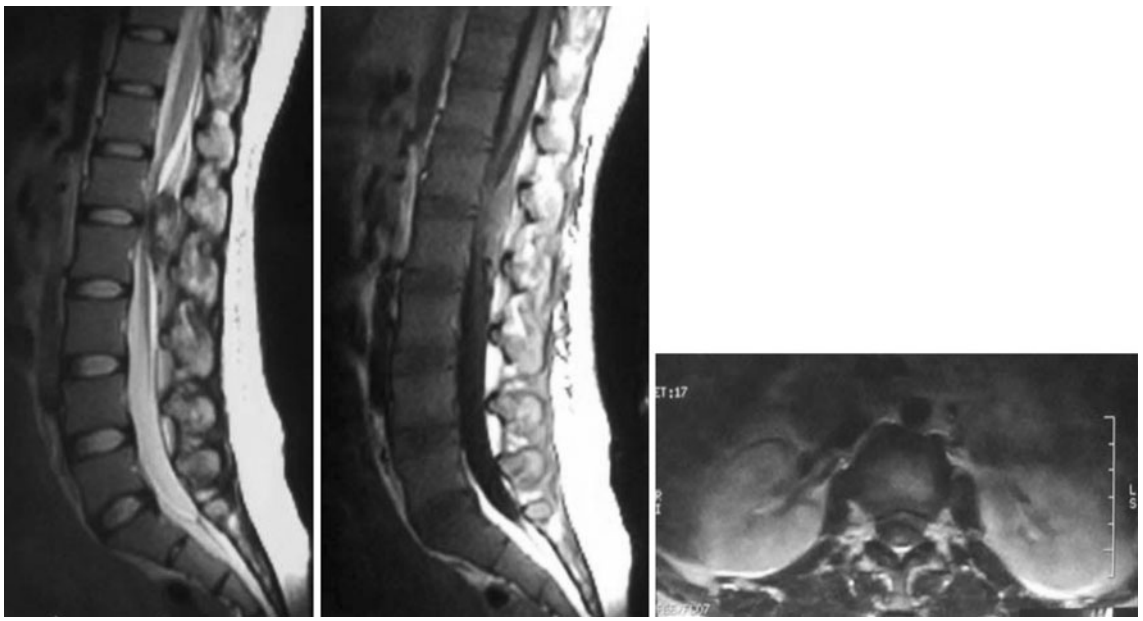

Fig. 1 Magnetic resonance images showing a large epidural hematoma at the level of L1–2 (short T1-weighted image and short T2-weighted image). The intervertebral foramen and lateral recess at the right side had become stenosed

venous injury occurs slowly and requires time to accumulate to a clinically significant level, our patient presented as neurologically intact during the early postoperative period. The unilateral sensorimotor deficit in this patient could be explained by an epidural hematoma causing stenosis of the intervertebral foramen at the right side and compression of the ventral roots.

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