

Iatrogenic femoral neuropathy: A report of two cases

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Introduction

Iatrogenic femoral neuropathy (FN) is a rare condition that could occur diverse symptoms. Most of them had shown benign courses but some patients experience long-term disability. We report two cases of FN after arterial blood sampling and pelvic surgery.

Case 1

A 43-year-old female with liver cirrhosis visited emergency room presenting onset of hematemesis and confused mental status. The patient admitted to intensive care unit and treated for esophageal varix and hepatic encephalopathy. Femoral artery puncture was done for arterial blood gas analysis during the admission. She complained weakness and sensory change of left lower extremity after recovery of consciousness. Initial manual muscle test (MMT) revealed 3/5 of left hip flexor, 0/5 of left knee extensor, and otherwise normal. Loss of left quadriceps deep tendon reflex (DTR) and hypesthesia on left anteromedial thigh and medial lower leg were found on physical exam. Nerve conduction study (NCS) was performed at 2 weeks of onset that showed absent response of left femoral and saphenous nerves. On needle electromyography (EMG), left vastus medialis (VM) and rectus femoris (RF) showed positive sharp waves and no motor unit action potential (MUAP). With iliopsoas (IP) hematoma confirmed on CT and MRI, we concluded left FN caused by IP hematoma, and prescribed isometric strengthening of left lower extremity and gait training with knee stabilizer. On the onset of 30 weeks, follow-up NCS showed small waveform of femoral nerve with regeneration evidence of MUAP at left VM and RF. Clinically, she could walk without orthosis, and MMT revealed 5/5 of left hip flexor and 4/5 of left knee extensor.

Case 2

A 51-year-old female with endometrial cancer had a radical abdominal hysterectomy under general anesthesia for 4 hours. On the 1st postoperative day, she complained weakness and sensory change of right lower extremity, and visited outpatient clinic after 4 weeks of onset with partial improvement. Initial MMT revealed 5/5 of hip flexor and 2/5 of knee extensor, and loss of right quadriceps DTR and hypesthesia of medial lower leg were observed on physical exam. NCS showed reduced amplitude of right femoral and saphenous nerves. On needle EMG, positive sharp waves and reduced recruitment pattern were noted in right IP, VM and RF. We diagnosed right FN after pelvic surgery and prescribed strengthening exercise of lower extremity and gait training. On the onset of 12 weeks, follow-up electrophysiologic study showed no change, but weakness was improved to 5/5 in both right hip flexor and knee extensor without disability.

Conclusion

We report two cases of iatrogenic FN after femoral artery puncture and prolonged pelvic surgery. In both cases, clinically, they had shown nearly full recovery without disability, although there was only partial improvement in electrophysiologic study. Proper exercise and orthotic management could help to reduce disability and improve mobility.