

Iatrogenic Nerve Injury following Varicose Vein Surgery: Case Series

SE YOUNG SHIN^{1*}, KI HOON KIM¹, DONG HWEE KIM^{1†}

Korea University Ansan Hospital, Department of Rehabilitation Medicine¹

INTRODUCTION

Although nerve injuries following varicose vein surgery are rare, it may be permanent or ongoing symptoms. Nerve injuries after varicose vein procedure may be diagnosed using clinical examination, electrophysiologic and ultrasonographic examination. We report three cases with nerve injuries related with varicose vein operation.

CASE REPORT

CASE 1: A 62-year-old man who received left varicose vein operation had sensory loss on the foot dorsum. Electrophysiologic study suggested severe injury of medial dorsal cutaneous branch of left superficial peroneal sensory nerve. Ultrasonography demonstrated two neuromas of medial dorsal cutaneous branch of the left superficial peroneal nerve located 3 cm proximal to intermalleolar line (Figure 1A). The patient received neuroma excision operation (Figure 1B). Also, 4 cm sized inside out vein graft from the ipsilateral great saphenous vein was done for the neuroma excision defect site.

CASE 2: A 55-year-old woman complained hypoesthesia on the left calf and sole which developed 2 weeks after the varicose vein surgery. The motor grade of left ankle plantar flexion was good. Electrophysiologic study suggested severe left tibial neuropathy around the popliteal fossa sparing muscular branch to soleus. Ultrasonographic examination revealed traumatic neuroma of the left tibial nerve around popliteal fossa (Figure 2A). Exploration and neurolysis was performed, and traumatic neuroma-in-contiguity of medial sural cutaneous nerve and adhesion on posterior portion of tibial nerve were identified (Figure 2B).

CASE 3: A 57-year-old man who underwent varicose vein surgery complained the sensory change on the left sole. Sensation on the left lateral sole and calf was decreased. Muscle testing of the left ankle plantar flexion was good grade (grade IV). Electrophysiologic study revealed incomplete left tibial neuropathy around popliteal fossa. Ultrasonography study found traumatic neuroma of the left tibial nerve around popliteal fossa (Figure 3A). Surgical exploration demonstrated traumatic neuroma of the left tibial nerve and the surrounding adhesion around popliteal fossa where varicose vein operation was performed (Figure 3B).

CONCLUSION

In our patients, one superficial peroneal nerve injury and two tibial nerve injuries were diagnosed using electrophysiologic and ultrasonographic studies, which were confirmed with surgical exploration and excision of traumatic neuroma. Ultrasonographic examination based on the electrophysiologic findings would be very useful for evaluating the patients with suspected iatrogenic nerve injury from varicose vein surgery.

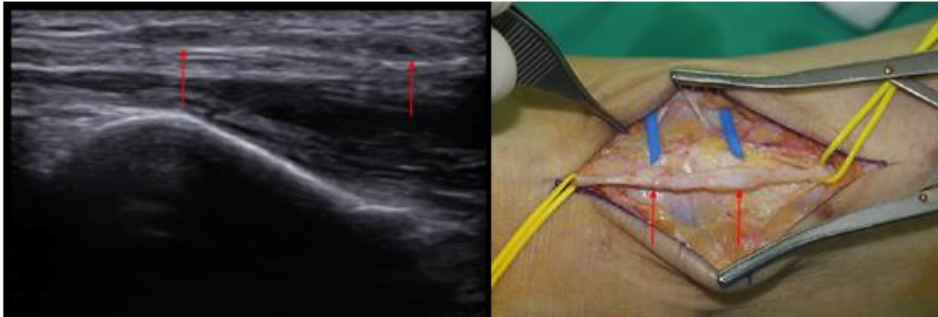


Figure 1. Ultrasonographic findings and intraoperative findings. Two neuromas(arrow) of left superficial peroneal nerve is describe at the ankle level.

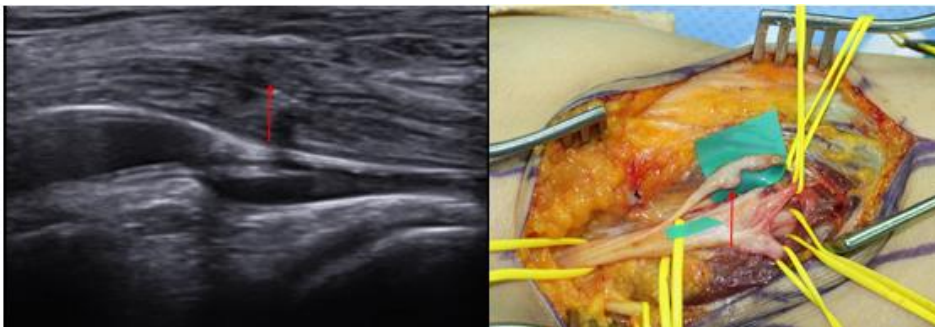


Figure 2. Ultrasonographic findings and intraoperative findings. Neuroma(arrow) of medial sural cutaneous nerve.



Figure 3. Ultrasonographic findings and intraoperative findings. Traumatic neuroma(arrow) of the left posterior tibial nerve around popliteal fossa