

Is the Nerve Block Always the Culprit?: A Case Report of Post-Surgical Sciatic Nerve Injury and the Importance of Diagnostic Follow-up

Ali Seferovich, MD
Nabil Elkassabany, MD
Priyanka Singla, MD

Introduction:

- Peripheral nerve injury associated with regional anesthesia is exceedingly rare. These injuries present complex diagnostic challenges, often leading to the premature assumption that regional anesthesia is the sole etiology.
- Patients with suspected nerve injury should prompt further diagnostics including electromyography, advanced imaging and neurological evaluation.

Case Report:

- A 71-year-old male underwent left calcaneal Open Reduction Internal Fixation with bone graft in October 2023 after a traumatic fall from a ladder.
- Prior to surgery he received a popliteal sciatic nerve block using ultrasound guidance and nerve stimulation.
- He later presented to Orthopedic surgery at our institute with burning pain and numbness in the dorsal aspect of the left foot and tingling of the lateral leg.
- The patient underwent electromyography (EMG) in September 2025 which showed chronic incomplete left sciatic neuropathy localizing to, or just proximal to, the bifurcation of the nerve, distal to the takeoff of motor fascicles that innervate the short head of the biceps.
- In November 2025, the patient was seen by the pain management clinic who recommended an MRI of the thigh and neurosurgical evaluation.
- MRI demonstrated mild swelling around the nerve and a ganglion cyst near the nerve which may be contributing to his symptoms.
- After consultation with neurosurgery the patient was scheduled for surgery in January 2026

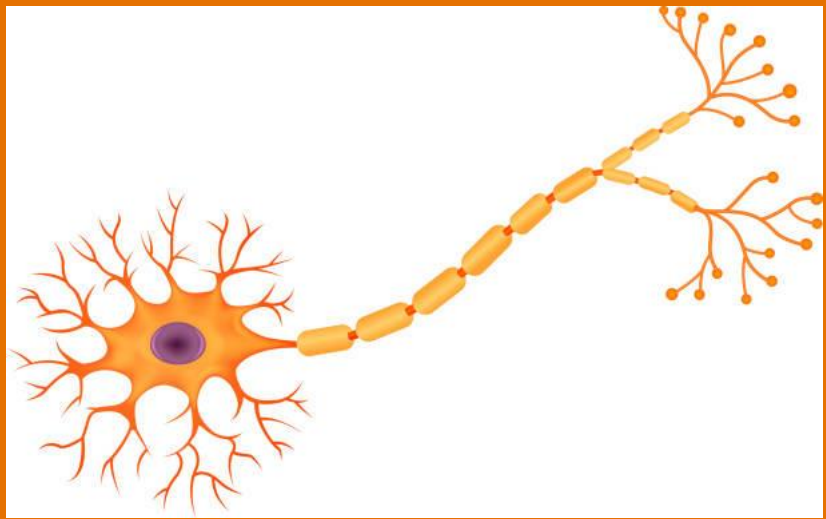
Post-surgical peripheral nerve injury requires follow-up!

- Nerve injury is a rare, but potential complication of regional anesthesia
- Patients with peripheral nerve injury should be promptly evaluated for consideration of EMG studies, radiologic imaging or surgical referral
- This can elucidate other causes such as compressive neuropathy (example: ganglion cyst), positioning injuring or pre-existing subclinical neuropathy
- Patients can have meaningful recovery if referred for further work-up in a timely manner



Case Report Continued:

- The patient underwent sciatic nerve decompression surgery 1/16/26.
- There was some degree of connective tissue compression on the distal sciatic nerve immediately proximal to the branching point.
- Ganglion cyst was not found to be abutting or compressing the nerve, so it was not removed.
- The patient now has improved mobility, smoother gait, and improved nerve-related pain and tingling.
- Needle trauma can lead to inflammation and compression of a nerve, but it remains unclear if this nerve injury is directly a result of the regional block
- More importantly this patient has gained meaningful improvement from prompt intervention
- ASRA Practice Advisory recommends that when no or incomplete improvement occurs within 3 to 5 months, referral to a peripheral nerve surgeon is recommended; however, an even earlier timeline could be considered



References
Campbell WW. Evaluation and management of peripheral nerve injury. *Clin Neurophysiol*. 2008;119(9):1951-1965. doi:10.1016/j.clinph.2008.03.018

Kamble N, Shukla D, Bhat D. Peripheral Nerve Injuries: Electrophysiology for the Neurosurgeon. *Neurol India*. 2019;67(6):1419-1422. doi:10.4103/0028-3886.273626

Kroll DA, Caplan RA, Posner K, et al: Nerve Injury associated with anesthesia. *Anesthesiology* 1990; 73: 202-207.

Neal JM, Barrington MJ, Brull R, et al: The Second ASRA Practice Advisory on Neurologic Complications Associated With Regional Anesthesia and Pain Medicine: *Executive Summary 2015* *Regional Anesthesia & Pain Medicine* 2015;40:401-430.

