

# Just Blame Anesthesia (Regional Anesthesia that is): Postoperative neurologic complications in a tertiary care center.

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## Introduction

Postoperative neuropathies are rare but potentially devastating. Typically, perioperative neuropathies are attributed to the surgical injury, peripheral nerve blocks, tourniquet, retraction, or positioning. Most of these injuries warrant supportive management. However, in a small fraction of cases, perioperative presentation of peripheral nerve injury can be the first signs of an underlying comorbidity involving the nervous system and a therapeutic window may be missed due to failure to identify reversible neuropathy.

We present two patients with iatrogenic neuropathy initially attributed to regional anesthesia but ultimately diagnosed as post-surgical inflammatory neuropathy (PIN).

Consent was obtained from both patients for these case reports. All information has been deidentified and is in compliance with the Committee for Protection of Human Subjects and Institutional Review Board.

## Case #1:

An 83-year-old independent widower had **fascia iliaca block** upon arrival for fragility femur fracture. He had a history of postoperative urinary retention due to preexisting benign prostatic hyperplasia and his urinary catheter remained in place.

**Day 2:** Cephalomedullary nail of the femur with postoperative **femoral nerve block**

**Day 3 & 4:** Inability to ambulate without assistance largely attributed to orthostatic hypotension.

**Day 6:** Unable to ambulate or void spontaneously which was attributed to deconditioning, orthostatic hypotension, and preexisting obstructive uropathy.

**Discharged from inpatient rehabilitation:** Required a walker for ambulation over 10 feet and a wheelchair for over 50 feet.

**Four-month follow-up:** Persistent neuropathic right leg pain and recurrent falls. Referred to neurology clinic.

**Imaging (CT and MRI):** Unremarkable except for atrophic changes attributed to recent injury.

- **Nerve conduction studies revealed moderate-severe axonal sensorimotor polyneuropathy with severe lumbosacral plexopathy, primarily affecting the right femoral nerve.**

**Eight months post-injury:** Right leg weakness and neuropathic pain persist. Patient continues with regular outpatient physical therapy and takes Gabapentin 100 mg nightly.

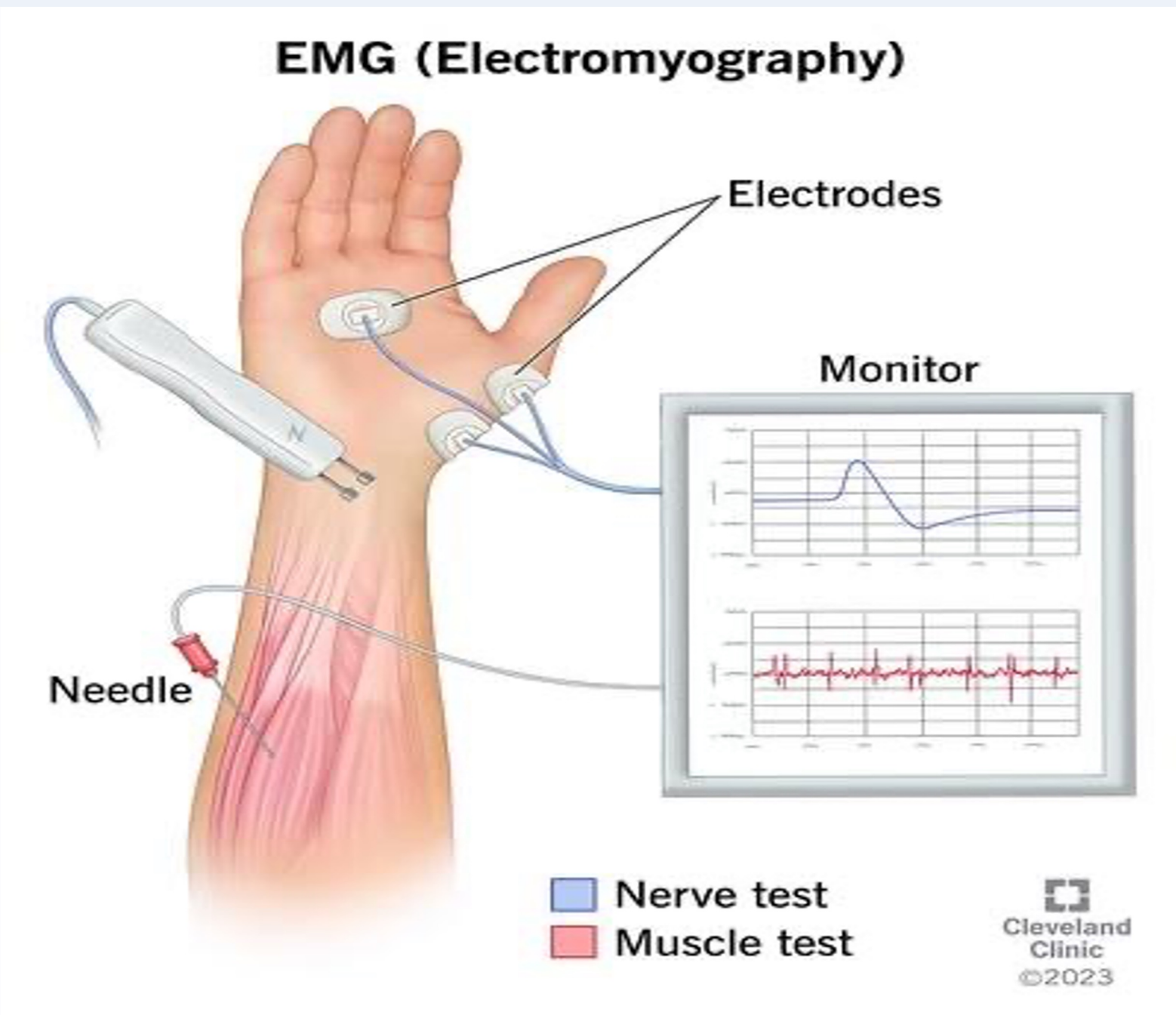
## Case #2:

A 42 year-old woman presented for robotic-assisted hysterectomy with cystoscopy and received bilateral **quadratus lumborum blocks**.

**Day 1:** Diffuse bilateral upper and lower extremity weakness, numbness, and urinary retention. Her upper extremity weakness resolved over two days but lower extremity weakness, numbness, and urinary retention continued.

**Day 4:** Neurology was consulted and attributed her residual deficits to “QL block migrating into the quadriceps with slow metabolism or extravasation of anesthetic”. However, given recent experience, our regional anesthesia faculty felt that the patient’s clinical picture was more consistent with PIN, and suggested lumbosacral MRI and EMG.

**Day 10:** Neurogenic bladder was resolved, lower extremity weakness continued with the right side more affected than left. Neurology recommended expectant management. She was given instructions to follow-up with the outpatient neurology clinic for EMG if her symptoms did not resolve in two weeks. MRI and EMG performed two weeks postoperatively were completely normal despite continued lower extremity weakness. A dose of steroids was suggested to the primary team. Follow-up is pending.

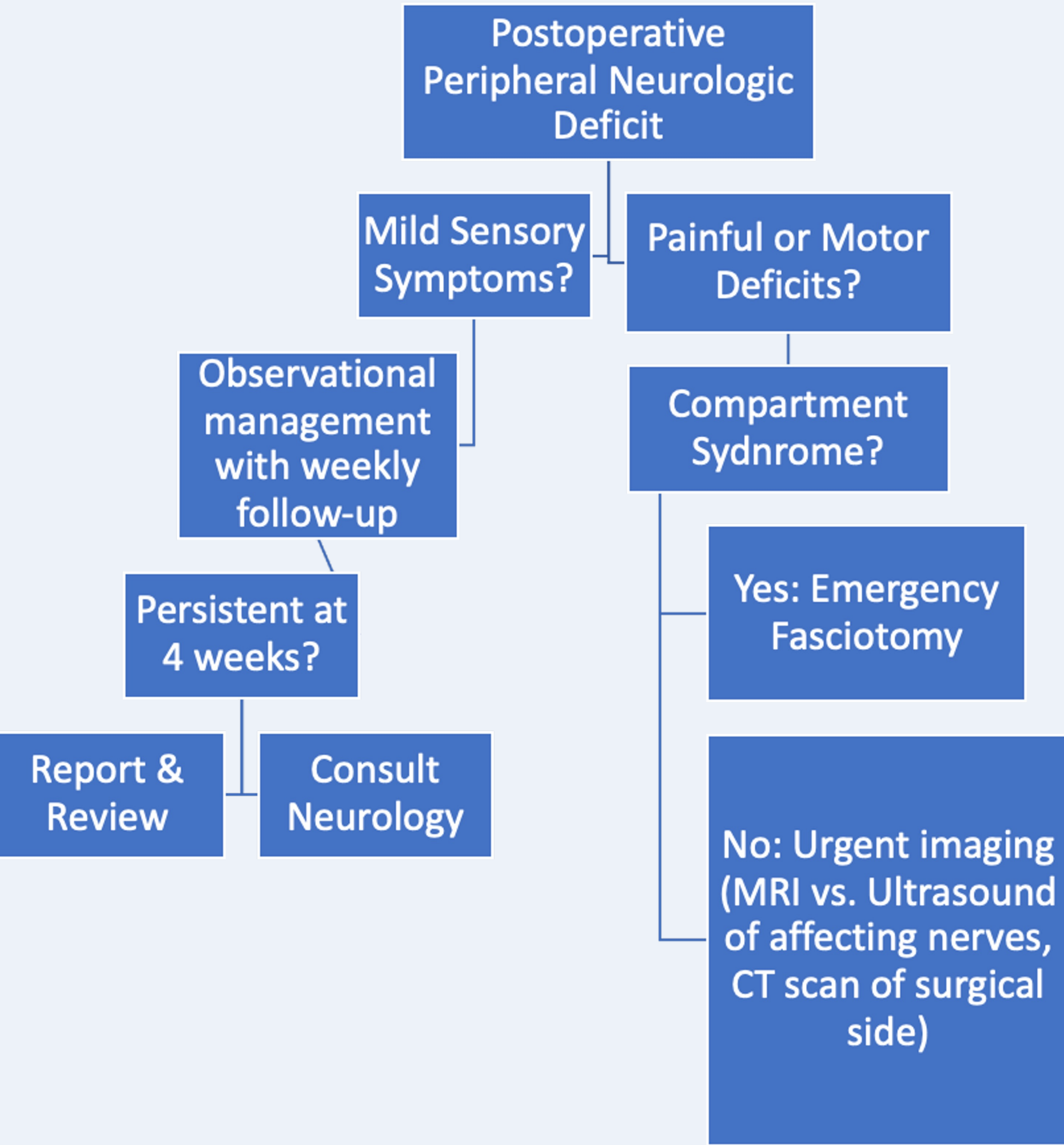


## Discussion:

Both of our patients experienced symptoms inconsistent with complications of the PNBs, prompting further investigation. Unfortunately, there is no gold-standard treatment for PIN. Early corticosteroids and immunosuppressants have been described to improve functional status, but there is very little literature regarding this rare disease. Nevertheless, an open-minded approach to postoperative neuropathies may significantly improve prognosis and quality of life.

## Conclusions:

While nerve injuries due to PNBs are rare due to the widespread availability and utilization of ultrasonography, all regional anesthesiologists should be prepared to contribute to a multidisciplinary discussion and management plan surrounding perioperative neuropathy.



## References:

