

BACKGROUND

- Fascia iliaca block (FIB) is commonly used for analgesia in hip and lower-extremity surgery and is generally associated with predictable motor and sensory involvement. Profound or prolonged motor deficits following FIB are uncommon.
- When such deficits occur, they are frequently discussed within the framework of a so-called “second-hit” phenomenon in patients with pre-existing neurologic vulnerability; however, postoperative neurologic deficits are often multifactorial. Prompt evaluation is therefore necessary to distinguish expected block-related effects from peripheral nerve injury or central neurologic pathology.

Case

- A single-shot ultrasound-guided fascia iliaca block was performed using 40 mL of 0.25% bupivacaine with epinephrine without immediate complication. The patient’s medical history was notable for chronic lumbar spine disease with prior lumbar surgeries and an implanted spinal cord stimulator.
- Postoperatively, the patient developed profound unilateral lower-extremity weakness involving hip flexion, knee extension, and knee flexion (0–1/5 strength), with relative preservation of distal motor function. Sensory deficits spanned multiple dermatomal distributions, and patellar reflexes were absent. The severity, anatomic distribution, and duration of weakness exceeded the expected effects of a fascia iliaca block and persisted for several days.

METHODS

- This report describes a single patient who underwent lower-extremity surgery with perioperative ultrasound-guided single-shot fascia iliaca block for postoperative analgesia. Clinical data were obtained from the inpatient medical record, including anesthesia documentation, serial neurologic examinations, consultant evaluations, and imaging studies. No neuraxial anesthesia was administered.

Anatomy

Figure 1: MRI of the Lumbar Spine
Significant lumbar stenosis at L2-L3 and L3-L4

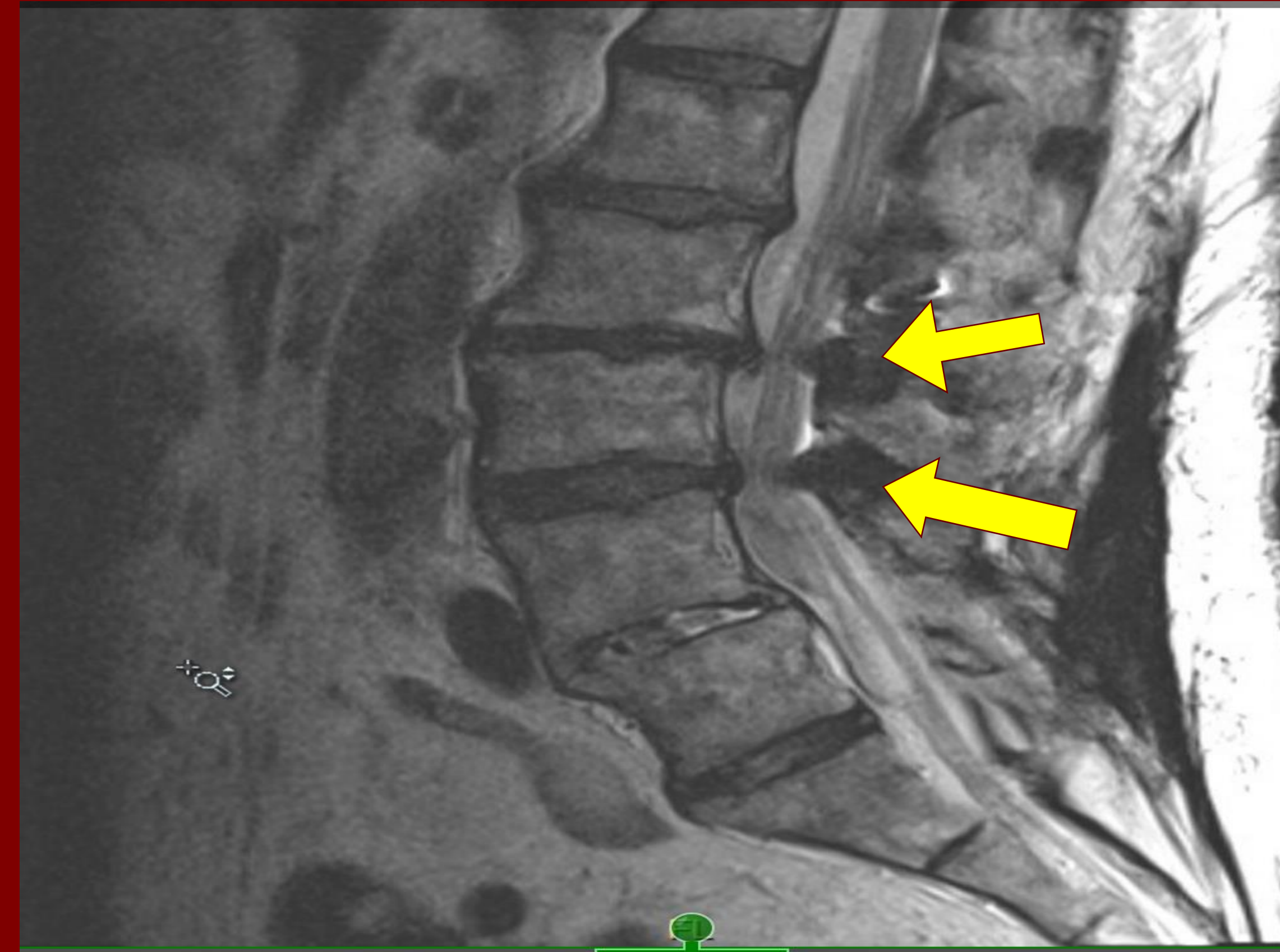
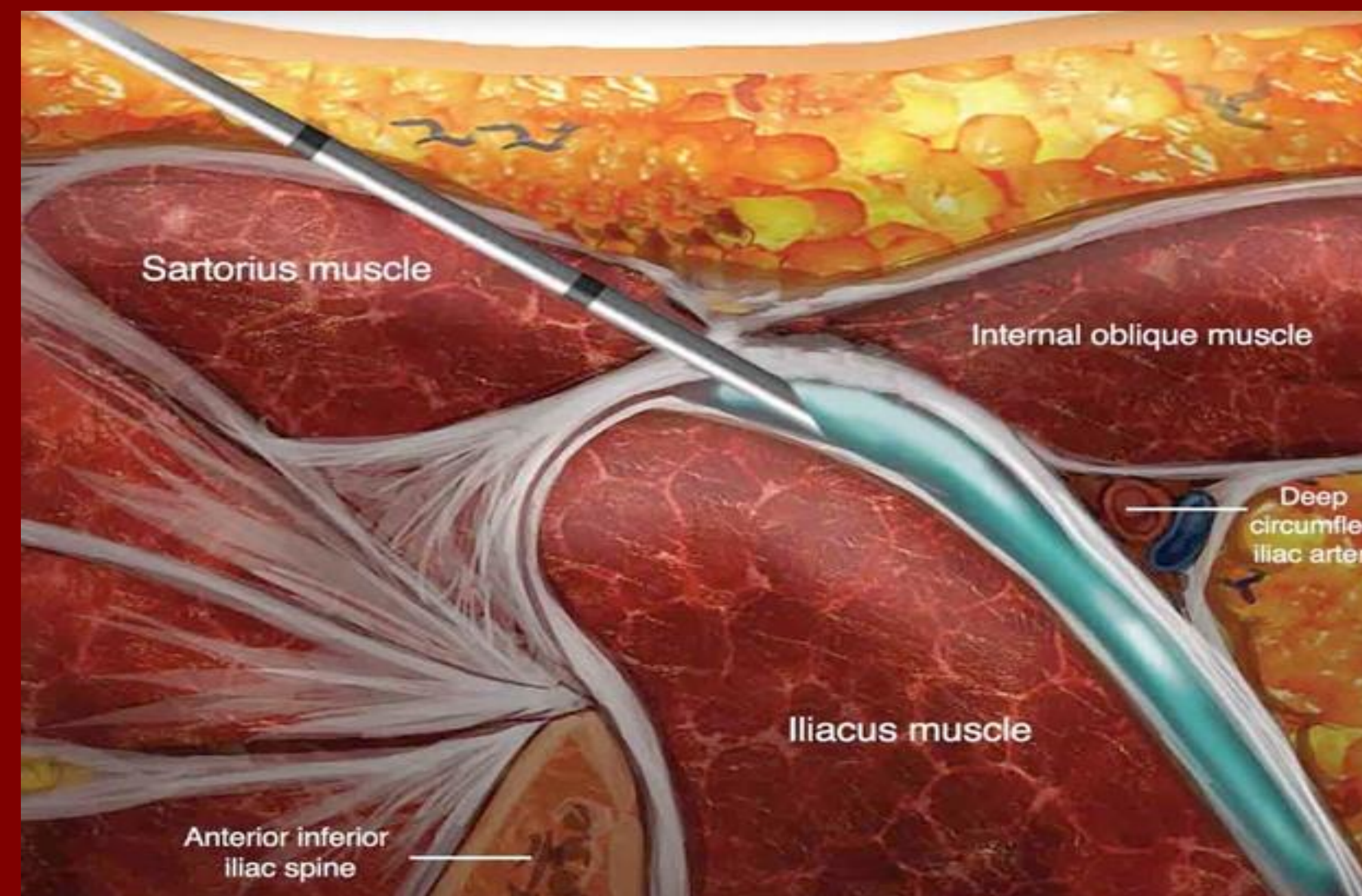


Figure 2: Anatomy of Fascia Iliaca Nerve Block



RESULTS

- Neurology consultation was obtained. Detailed neurologic examination demonstrated involvement beyond the femoral nerve distribution, including features inconsistent with an isolated peripheral nerve injury.
- MRI of the lumbar spine demonstrated multilevel central canal stenosis with associated left-sided foraminal stenosis, without evidence of acute compressive pathology.
- Given the persistence of neurologic deficits in the setting of limited neuraxial reserve, the patient subsequently underwent lumbar decompression during the same hospitalization.

Discussion

- This case highlights a rare but clinically important presentation of profound and prolonged postoperative motor deficit following a peripheral nerve block in a patient with significant pre-existing spinal pathology. While second-hit physiology is often cited as a potential mechanism in such patients, the distribution of neurologic deficits and subsequent imaging findings in this case suggest a broader, multifactorial process rather than isolated block-related injury. Reliance on prolonged block effect or second-hit physiology alone risks delaying recognition of alternative etiologies.
- Complete or persistent postoperative motor deficits should therefore prompt early neurologic consultation and imaging, particularly when deficits are not anatomically consistent with the performed block. Careful correlation between block anatomy, neurologic examination, and imaging is essential to guide timely diagnosis and management.
- Lastly, this case underscores the importance of maintaining a broad differential diagnosis and integrating the overall clinical context.

REFERENCES

- Neal JM, et al. ASRA practice advisory on neurologic complications associated with regional anesthesia and pain medicine. Reg Anesth Pain Med. 2015.
- Hebl JR. Neurologic complications of regional anesthesia. Reg Anesth Pain Med. 2006.
- Kopp SL, et al. Regional anesthesia in patients with preexisting neurologic disease. Anesth Analg. 2015.