

Postpartum Leg Weakness After Epidural: Diagnostic Dilemma Between Obstetric and Anesthetic Causes

Anterpreet Singh, MD; Taruna Penmetcha, MD; Gunar Subieta-Benito, MD; Kevin Pena, MD
Department of Pain Medicine, John H. Stroger, Jr. Hospital of Cook County, Chicago

Introduction & Methods

Postpartum lower extremity neuropathies are rare and often attributed to obstetric rather than anesthetic causes. Lumbosacral plexopathy due to mechanical stretch or compression during childbirth is a key consideration. This case highlights the diagnostic challenge in a postpartum patient who developed right leg weakness following epidural anesthesia for cesarean delivery.

Methods (IRB Status): As the case report is devoid of patient identifiable information, it is exempt from IRB review requirements as per Cook County Health policy. The patient's informed consent was obtained for submission of this case report.

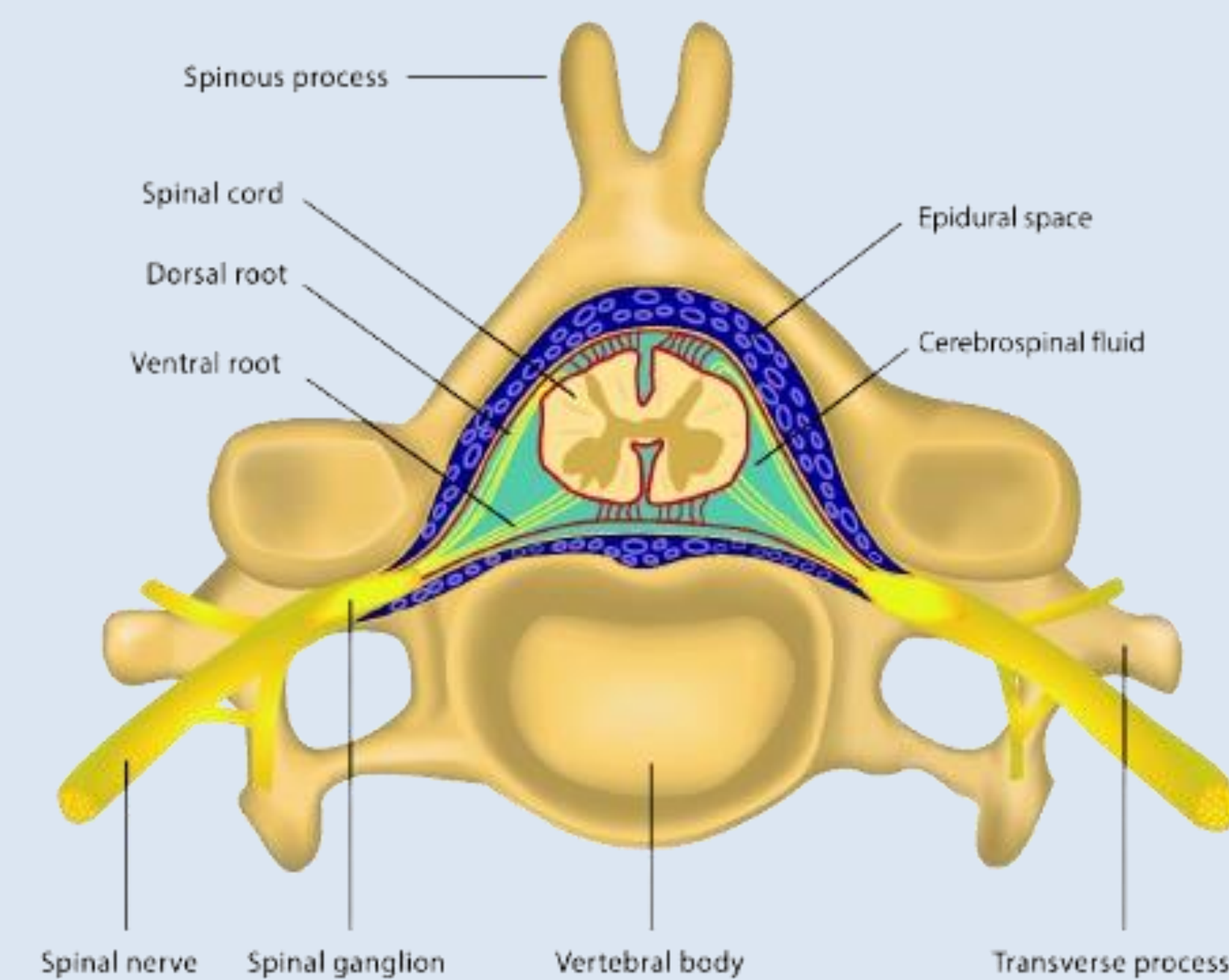


Figure 1. The diagram shows a cross-sectional view of the lower spine, specifically the lumbar region, illustrating the epidural space and surrounding structures relevant to epidural anesthesia

Case Presentation

A 26-year-old G2P1 at 39 weeks of gestation presented for labor induction. After 20 hours of labor with no cervical change, she underwent cesarean delivery under epidural anesthesia. On postoperative day one, she reported right leg weakness, difficulty sitting up, and numbness below the knee. Neurologic exam showed 1/5 right hip flexion and dorsiflexion, decreased sensation below the knee, and hyperreflexia. MRI and CT imaging revealed no compressive pathology. Venous ultrasound was negative for DVT.

Her proximal strength improved within 24 hours; however, foot weakness and paresthesia persisted. A low-dose ketamine infusion reduced pain from 5/10 to 0/10. She was discharged with AFO, gabapentin, and physical therapy. At follow-up, strength improved to 4+/5 with independent ambulation.



Figure 2. Sagittal T2-weighted MRI shows mild disc bulges at L4-L5 and L5-S1 without significant spinal canal stenosis or compressive pathology. No evidence of epidural hematoma or abscess, supporting a peripheral or plexus-level etiology consistent with obstetric lumbosacral plexopathy.

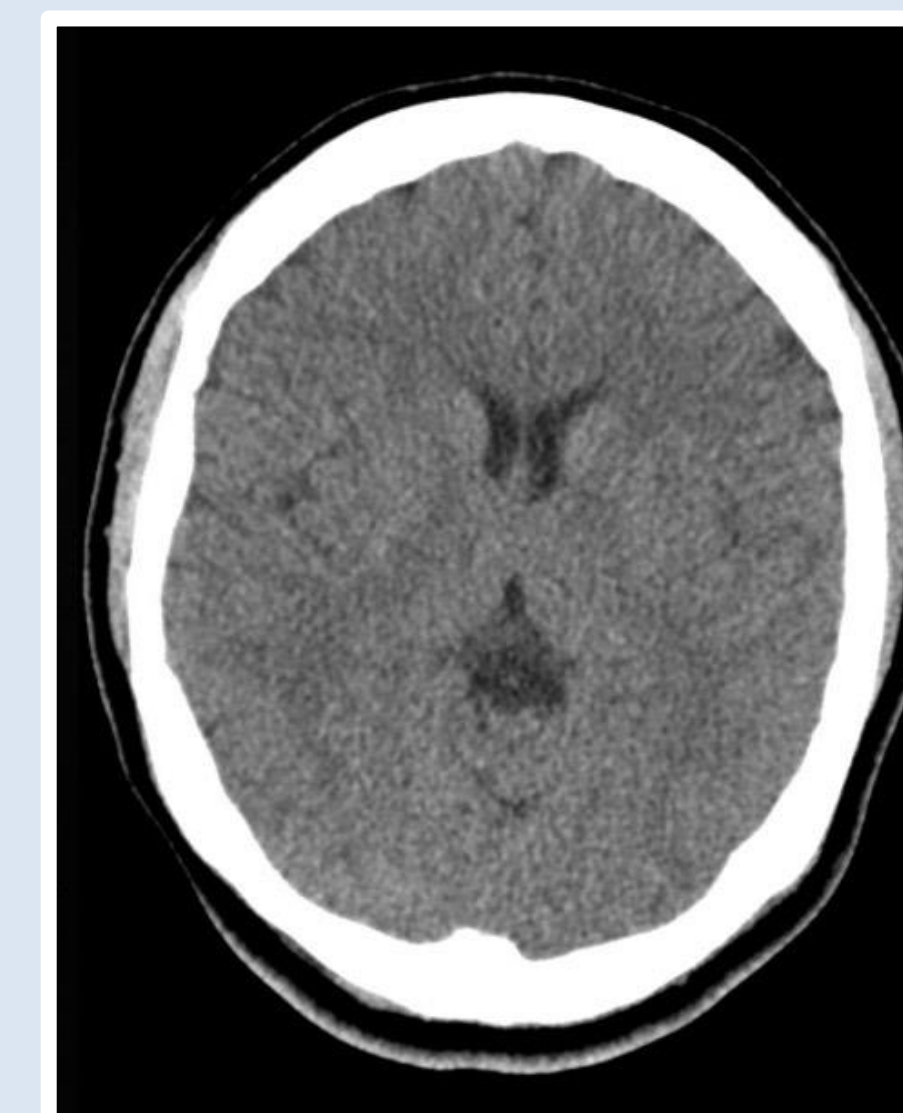


Figure 3. Non-contrast CT of the head demonstrates no acute intracranial abnormalities. No evidence of hemorrhage, infarction, or space-occupying lesions, helping exclude central causes of the patient's right lower extremity weakness.

Discussion & Conclusion

This case underscores the importance of distinguishing obstetric neuropathy from neuraxial complications. MRI ruled out epidural hematoma or compressive lesions. The presentation—unilateral weakness, intact bladder/bowel function, and gradual recovery—suggested obstetric lumbosacral plexopathy. Neuraxial anesthesia-related nerve injury is rare without imaging abnormalities. Prolonged labor and positioning likely contributed to mechanical stretch injury.

Conclusion: In postpartum patients with new-onset lower extremity weakness and normal spinal imaging, obstetric neuropathy should be a leading differential. Multimodal pain management and supportive care, including ketamine infusion, can promote recovery.

References

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