

INTRODUCTION

Meralgia paresthetica (MP): This lateral femoral cutaneous nerve (LFCN) neuropathy affects approximately 32 per 100,000 persons.
Surgical Indications: Intervention is typically indicated when patients are refractory to conservative treatment.
Success Rates: Meta-analysis suggests pain relief rates of 22% for infiltration, 63% for decompression, and 85% for neurectomy.
The Challenge: Identification of the nerve can be difficult due to significant anatomical variability.
Objective: To utilize ultrasound guidance for marking and placing a sub-neural wire to assist neurosurgeons during complex neurectomies.

MATERIALS&METHODS

Imaging: A high-frequency linear ultrasound probe was used

Confirmation: Secondary confirmation was performed intraoperatively inside the incision after opening the fascial layer.

Technique: For the second surgery, a **Tuohy needle** was placed under the nerve with ultrasound guidance, and a **spring-wire** was threaded underneath to demarcate the LFCN.

CASE REPORT

History: A 57-year-old male with a history of gastric bypass and open abdominal surgery.
Presentation: Severe left lateral thigh pain and paresthesia following a previous femoral line placement.
Diagnosis: MP was diagnosed clinically; MRI and EMG were used to rule out radiculopathy.
Conservative Failure: Patient failed treatment with gabapentin, physical therapy, and diagnostic ultrasound-guided blocks.
Initial Surgery: A decompression was performed in May 2025 using preoperative ultrasound marking.
Recurrence: Although the entrapment point was relieved, pain relief lasted only three days.
Secondary Plan: A neurectomy was planned due to symptom recurrence and failure of escalated gabapentin, TENS, and lidocaine patches.
Intervention: To navigate anticipated scar tissue, a wire was threaded deep to the LFCN under ultrasound guidance.
Outcome: The surgeon successfully isolated the nerve and branches using the wire guide. The patient reported expected post-surgical numbness.

REFERENCES

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DISCUSSION

Identification Barriers: The LFCN is small, variable, and easily confused with scar tissue from previous procedures.
Intervention Levels: This case demonstrated two regional anesthesia roles: ultrasound-guided skin marking/confirmation and invasive wire demarcation.
Collaboration: Regional anesthesiologists can assist surgeons beyond standard analgesia by utilizing ultrasound expertise for intraoperative navigation.

