



## Introduction

- Meralgia paresthetica is a clinical syndrome of pain or dysesthesia in the anterolateral thigh due to compression of the lateral femoral cutaneous nerve.
- Typical pathology results from compression of the nerve as it passes underneath the inguinal ligament.
- Associated risk factors include body habitus (large abdomen, obesity, pregnancy), increased intrabdominal pressure due to ascites, tight belt, prolonged periods of forward flexion, and groin trauma<sup>[1]</sup>.
- Differential diagnosis that must be ruled out includes L3/L4 radiculopathy, lumbosacral plexopathy, and femoral neuropathy.
- Meralgia paresthetica is a clinical diagnosis typically confirmed with evidence of nerve entrapment via magnetic resonance imaging (MRI) and electromyography (EMG).

## Case Description

- A 63-year-old male presented to the outpatient clinic with a 2-year history of intermittent left anterior thigh numbness and tingling since a motorcycle accident.
- Past pertinent medical history included chronic low back pain and left lumbar radiculopathy.
- Patient described numbness and tingling in anterior thigh associated with exacerbation of low back pain.
- Ultrasound and EMG evaluations were indicated to differentiate lumbar radiculopathy and lateral femoral cutaneous neuropathy.
- During the ultrasound evaluation, evidence of cortical irregularities of the left anterior superior iliac spine were found and migrating in close relation to lateral femoral cutaneous nerve. These findings suggested Anterior Superior Iliac Spine (ASIS) avulsion.
- Decision was made for patient to return for ultrasound-guided hydro-dissection of the lateral femoral cutaneous nerve to reposition it away from the ASIS avulsion.
- Plan was to perform two trials of hydro-dissection one week apart

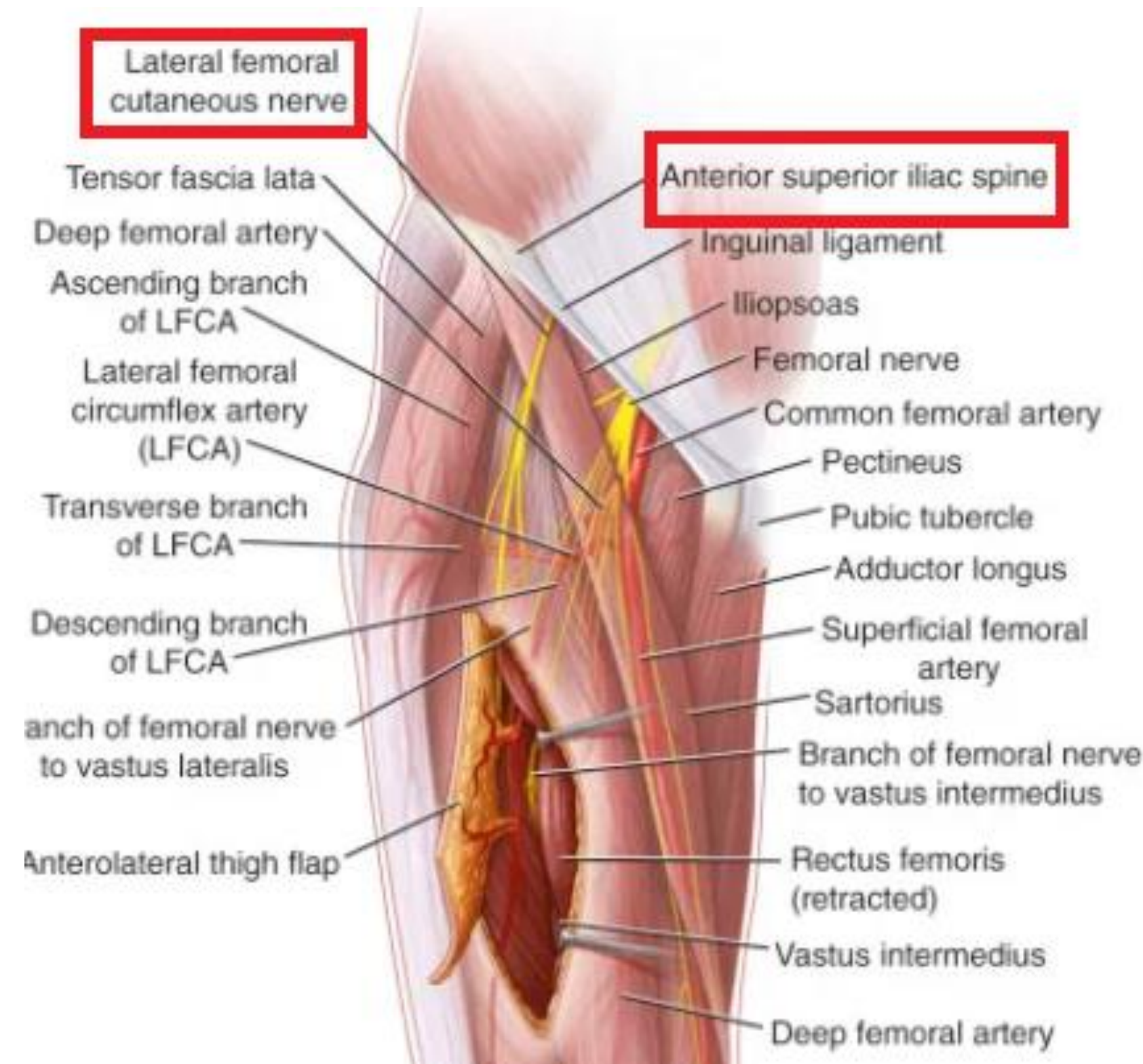


Figure 1. AP view of right thigh with ASIS in relation to Lateral Femoral Cutaneous Nerve<sup>[4]</sup>.

## Discussion

- Patient initially reported 70% resolution of symptoms after the first procedure, therefore the second procedure was withheld.
- Gradual worsening of the symptoms occurred 1-month post-procedure and a second ultrasound-guided hydro-dissection of the lateral femoral cutaneous nerve was performed. However, it did not provide similar favorable results and with some local skin irritations.
- Future plans include repeat hydro-dissection and evaluation of symptoms.
- The nature of this procedure can be user dependent as patient had two different residents with substantially different results
- Future procedure will document imaging and procedure approach to improve repeatability

## Conclusion

- This is an atypical presentation and highly unexpected as the lateral femoral nerve typically passes 6 cm medial to the ASIS<sup>[3]</sup>.
- When assessing a patient for meralgia paresthetica it is crucial to evaluate compression from deep structures along with the common superficial compressive mechanisms..
- If the patient presents good response to ultrasound-guided hydro-dissection procedures, potential permanent methods to reposition fragment or nerve should be considered.

## References

1. Parisi TJ. Meralgia Paresthetica: Relation to obesity, advanced age, and diabetes mellitus. *Neurology* 2011; 77:1538.
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3. Hanna A. The Lateral Femoral Cutaneous Nerve Canal. *J Neurosurg* 2017; 126:972.
4. Retrieved from <https://plasticsurgerykey.com/anterolateral-and- anteromedial-thigh-flaps/>, *Reconstructive Surgery* May 3 2019.