

# One Block: Two Bridges to Analgesia

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## Background

- The fascia iliaca compartment block serves as an adjunct for postoperative analgesia in patients undergoing hip and knee procedures
- The targeted nerves of this procedure are the femoral nerve and lateral femoral cutaneous nerve
- The block provides analgesia to the anteromedial and lateral part of the thigh in addition to the medial side of the leg.
- The block is considered an alternative to a femoral nerve block and can be performed using the infrainguinal or suprainguinal approach.

## Case Presentation

- 52-year-old male with no past medical history who presented to the emergency department as a level two trauma as the restrained driver in a motor vehicle crash
- CC: Right Hip Pain
- Vitals: T: 98.1 , RR: 16, BP:121/84, HR: 94, GCS: 15
- Physical Exam:

General: In acute distress, A&O x 3

Extremities: femoral pulses and pedal pulses present, RLE is externally rotated and slightly abducted; RLE range of motion is limited due to pain

- Imaging: XR of right hip shows a right intertrochanteric hip fracture
- Procedure: a suprainguinal fascia iliaca nerve block was performed using 20cc of 0.5% bupivacaine under ultrasound guidance

## Ultrasound Imaging

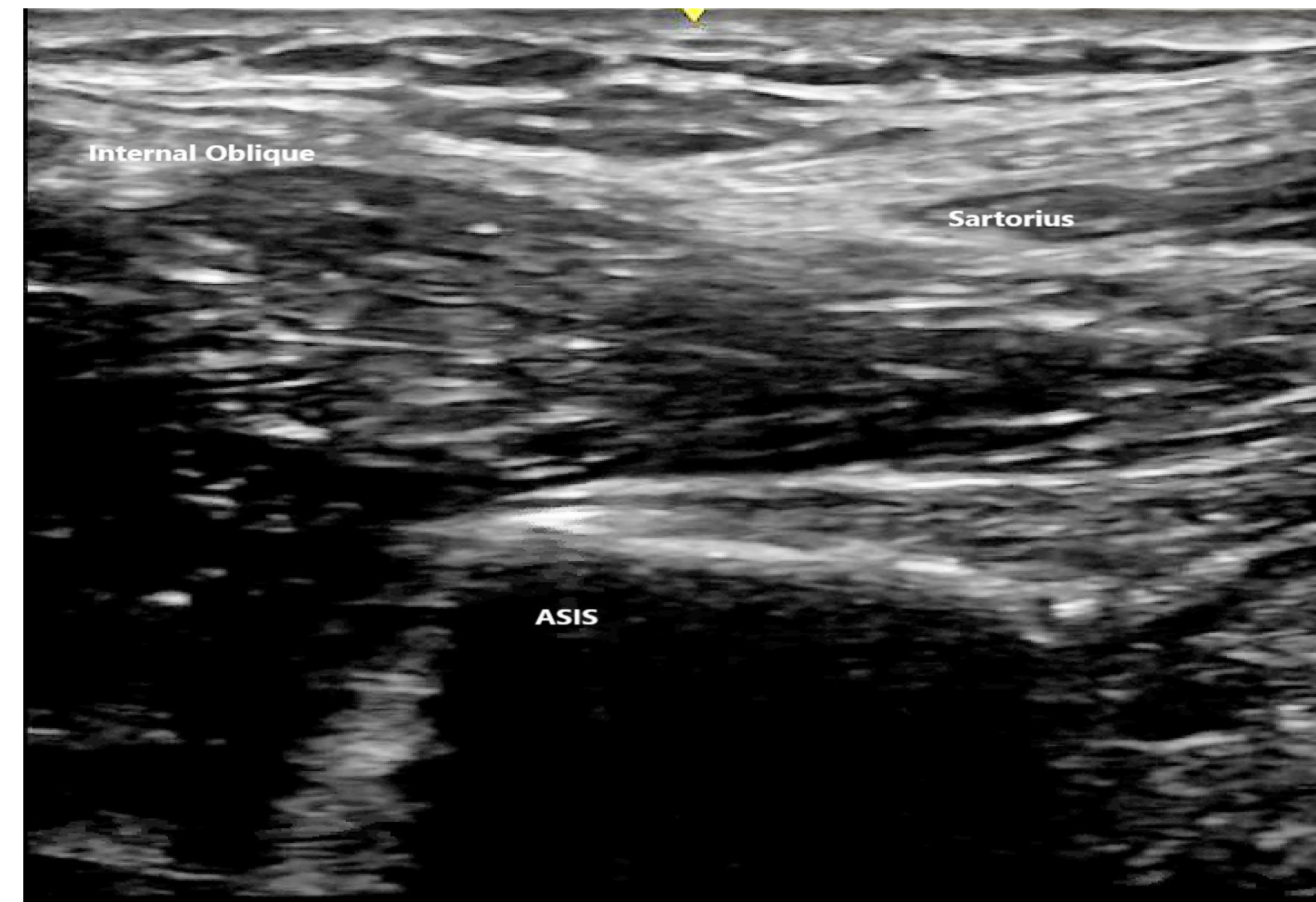
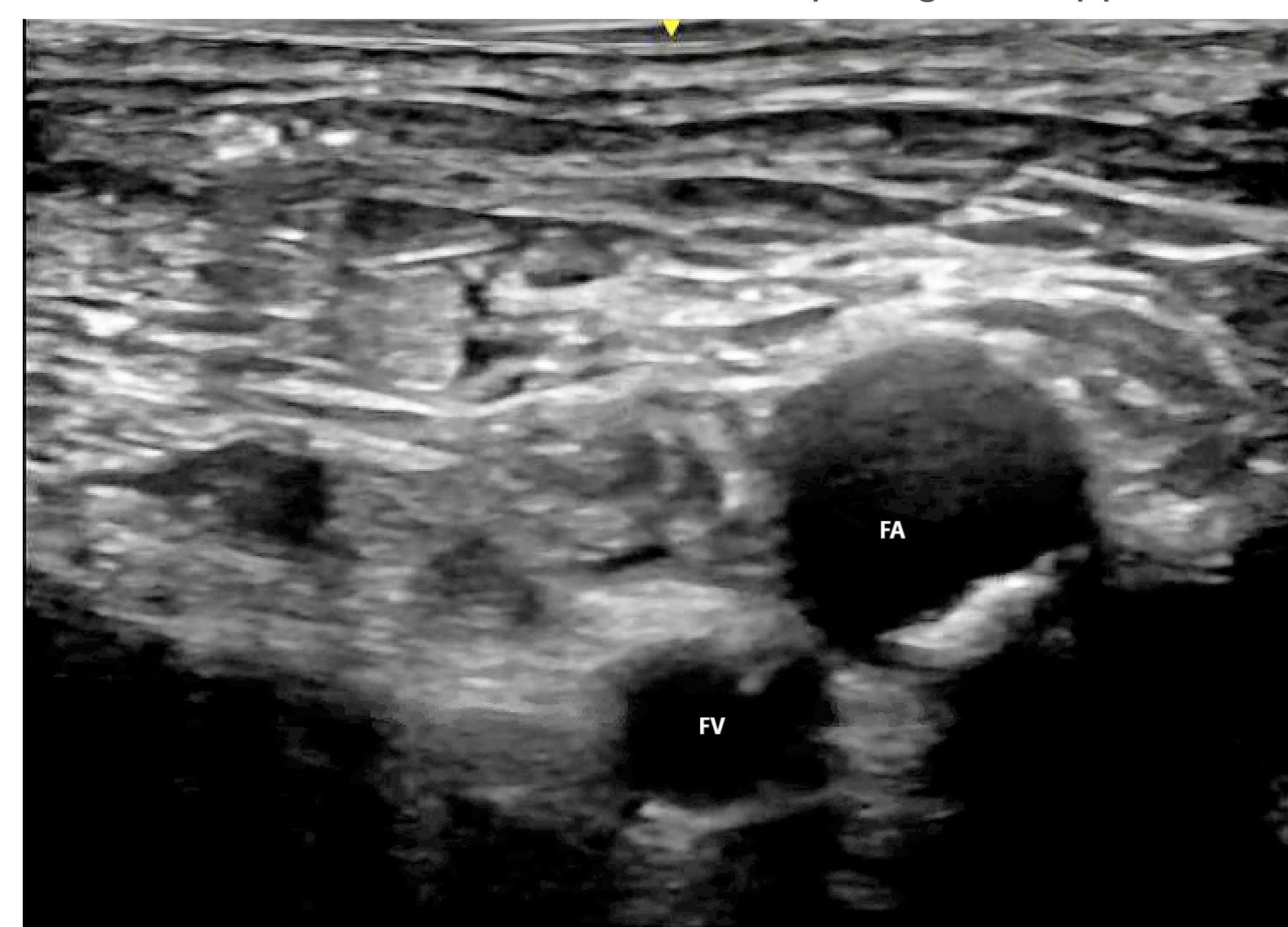


Figure 1: Ultrasound view of the suprainguinal approach



•Figure 2: Local anesthetic spread noted just deep to the fascia iliaca and sartorius muscle in the suprainguinal approach



•Figure 3: As a form of comparison, this image shows the femoral nerve seen adjacent to the femoral artery and vein in the infrainguinal approach

## Discussion

- This is an interesting case as it involves an emergency department performed nerve block that has two approaches for management of acute perioperative pain.
- Traditionally, an infrainguinal approach is taken in which the femoral nerve can be visualized between the iliopsoas muscle and the fascia iliaca just lateral to the femoral artery.
- Although this approach provides relief to the femoral and lateral femoral cutaneous sensory distributions, it unreliably blocks the obturator nerve, a branch of the lumbar plexus that is an essential component of the sensory innervation of the hip.
- To receive even better pain relief for our patient, a suprainguinal approach was taken. One in which a large volume of local anesthetic is more cephalically distributed between the iliacus muscle and fascia iliaca with the internal oblique and sartorius creating a bow tie appearance superficially.

## Conclusion

- The fascia iliaca nerve block is an effective means of perioperative analgesia for hip fractures that present to the emergency department.
- The block can be performed using the infrainguinal or suprainguinal approach; both of which are useful as patients wait for an emergent surgery.

## References

- CKumar K, Pandey RK, Bhalla AP, Kashyap L, Garg R, Darlong V, Malhotra R, Yadav CS. Comparison of conventional infrainguinal versus modified proximal suprainguinal approach of Fascia Iliaca Compartment Block for postoperative analgesia in Total Hip Arthroplasty. A prospective randomized study. Acta Anaesthesiol Belg. 2015;66(3):95-100. PMID: 26767235.
- Wang YL, Liu YQ, Ni H, Zhang XL, Ding L, Tong F, Chen HY, Zhang XH, Kong MJ. Ultrasound-guided, direct suprainguinal injection for fascia iliaca block for total hip arthroplasty: A retrospective study. World J Clin Cases. 2021 May 26;9(15):3567-3575. doi: 10.12998/wjcc.v9.i15.3567. PMID: 34046456; PMCID: PMC8130076.