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Introduction:

- Above Knee Amputation (AKA) → ↑ incidence of acute and chronic pain (5):
 - Regional anesthesia → ↓ risk (4,5)
 - Chronic pain → 6.4% with GA; 2.8% with RA (2)
 - Acute pain → RA ↓ opioids by 40% in first 72 hours (1)
- The fascia iliaca compartment block (FICB) targets (3):
 - Femoral nerve
 - Obturator nerve
 - Lateral femoral cutaneous nerve
- Continuous FICB has not been studied in lower extremity amputation.
- We present two cases in which suprainguinal FICB catheters were used for analgesia following AKA.

Materials / Methods:

- IRB review was not required for case-report per institution policy.
- A linear ultrasound probe used to identify the internal oblique (IO) muscle, sartorius muscle, and deep circumflex iliac arteries in the sagittal position.
- A 17-gauge tuohy needle was advanced from caudad to cephalad in-plane.
- 20mL of 0.25% ropivacaine was deposited at the junction of the IO and sartorius muscles, but above the iliacus muscle.
- A catheter was threaded in this area.
- Blocks assessed prior to surgery consistent with blockade of the:
 - Femoral nerve
 - Obturator nerve
 - Lateral femoral cutaneous nerve

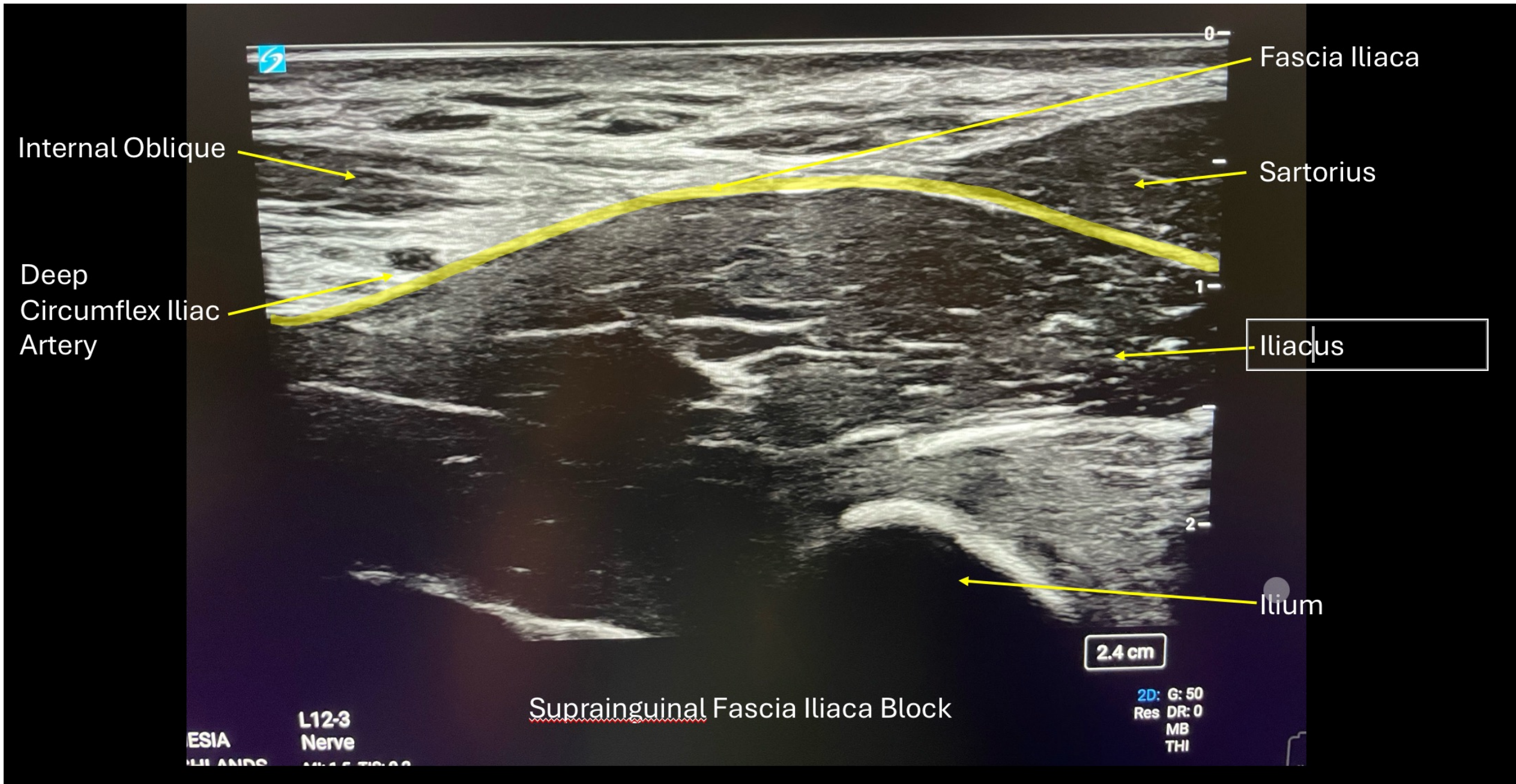


Image 1: Anatomy of Suprainguinal Fascia Iliaca Block

Suprainguinal Fascia Iliaca Catheter for Above
Knee Amputation: A Case Report

Patient 1: Block performed at 6:15am		POD0 (Before catheter removal)	POD0 (After catheter removal)	POD1	POD2
Case complete at 8:30am		9:00-20:00	20:00-00:00		
	Oral Morphine Equivalents	45	90	153	75
	Pain Score	3-7	8-9	7-10	2-7

Table 1: Pain Scores and oral morphine equivalents (OME) utilization in the postoperative period for Patient 1.

Patient 1:

- 37-year-old female with Ewing sarcoma:
 - Chronic opioid use (morphine ER 15 mg TID, oxycodone 10 mg Q6h)
 - Underwent left AKA
- Preoperative placement:
 - Left suprainguinal FICB catheter
 - Left subgluteal sciatic catheter
- Infusion: 0.2% ropivacaine at 6 mL/hr (2 mL bolus q15 min).

Outcome:

- Minimal pain POD0.
- POD1: FICB removed due to leakage around insertion site.
- Developed severe anterior/medial thigh pain (9–10/10).

This suggests significant contribution of the FICB to anterior/medial analgesia.

Patient 2: Block performed at 6:30am		POD0	POD1	POD2 (Before catheter removal)	POD2 (After catheter removal)
Case complete at 8:00am				00:00-18:00	18:00-00:00
	Oral Morphine Equivalents	57	15	7.5	15
	Pain Score	0-7	0-8	4-7	9-10

Table 2: Pain Scores and oral morphine equivalents (OME) utilization in the postoperative period for Patient 2.

Patient 2:

- 72-year-old male with dementia, prior stroke, and end-stage renal disease on intermittent hemodialysis:
 - Underwent right AKA
- Preoperative placement:
 - Right suprainguinal FICB catheter
 - Anterior sciatic catheter (limited patient cooperation)
- Infusion: 0.2% ropivacaine at 6 mL/hr (2 mL bolus q15 min).

Outcome:

- Pain assessment limited due to cognitive impairment.
- Appeared comfortable at rest postoperatively.
- On POD2, both catheters were removed by the patient.
- Transitioned to multimodal systemic analgesia.

Despite assessment limitations, early postoperative comfort suggests adequate sensory coverage with combined suprainguinal FICB and sciatic catheter.

Discussion:

- Continuous suprainguinal FICB may provide reliable medial and anterior thigh analgesia in AKA patients while avoiding risks associated with lumbar plexus catheters.
- Advantages compared to lumbar plexus catheters (4):
 - Avoidance of neuraxial-level anticoagulation considerations
 - Easier patient positioning
 - ↓ risk of epidural spread
- Compared to femoral nerve blocks:
 - Medial and lateral thigh sensory coverage
- In Patient 1, removal of the FICB catheter resulted in severe anterior/medial thigh pain:
 - Suggests meaningful analgesic contribution
- Catheter securement remains an important limitation, as premature removal occurred in both patients.

Limitations:

- Small sample size.
- Premature catheter removal.
- Patient cooperation.

Future Direction:

- Prospective comparison with femoral and lumbar plexus nerve catheters.
- Assessment of opioid consumption and long-term outcomes.
- Optimization of catheter securement techniques.

References:

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