

Contraindications

- Competent patient declines
- Allergy to local anaesthetic
- INR >1.5, Plts <100
- Infection at injection site
- Previous femoral vascular surgery
- Patient cannot report complications eg severe dementia, confusion
- High risk of compartment syndrome eg massive thigh swelling

If nerve block contraindicated give titrated iv morphine
Reassess pain score every 30 minutes until pain controlled

Local Anaesthetic Doses

- Levobupivacaine (Chirocaine)
2mg/kg maximum. [Use ideal body weight](#)
0.5% levobupivacaine, 1mL = 5mg
- For 50 – 70 kg patient:
 - **Fascia iliaca block** = 20 mL 0.5% levobupivacaine + 20 mL 0.9% saline (total 40 mL, diluted concentration 0.25%)
 - **Femoral nerve block** = 10 mL of 0.5% levobupivacaine

If nerve block fails, give alternative analgesia – do not repeat

Initial Assessment

Appropriate history, shortened, externally rotated leg, unable to straight leg raise, check neurovascular status
Assess pain score. Administer initial analgesia prior to x-ray
Fast track to x-ray - confirm fracture before inserting block. Place iv cannula, FBC, UE, Clotting, G+S, VBG

Preparation

- Document on EPR: informed consent, drugs used, block instillation time.
- Equipment:
- USS machine, sterile USS probe cover, dressing pack, chlorhexidine skin prep, green needle, 20 mL syringe x 2, 7.5cm Sonoplex block needle, 0.5% levobupivacaine 20 mLs, 0.9% saline 20 mL, 10 x 5cm Softpore dressing, assistant

Block Technique

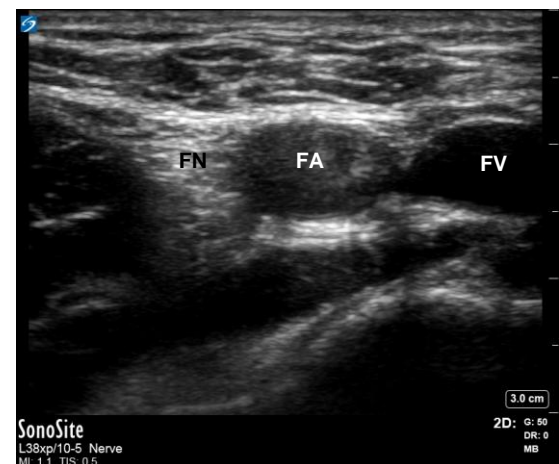
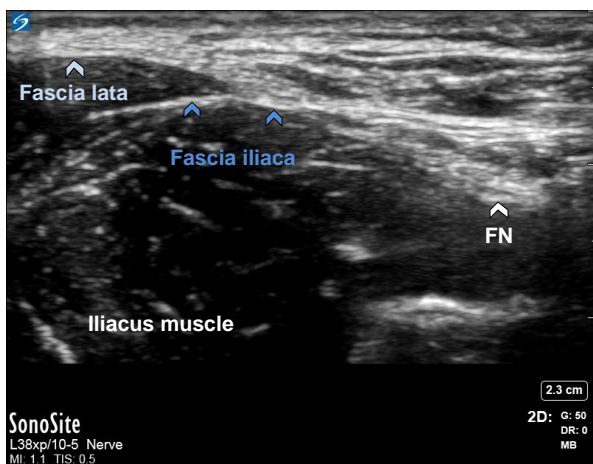
- Use the linear or curvilinear probe on 'nerve' setting in a sterile manner with drapes & sterile USS probe cover
- Apply a sterile dressing over injection site and label block date and time
- If fascial planes difficult to identify, perform a femoral nerve block

USS guided fascia iliaca block

- Scan transversely in the inguinal crease
- Identify the femoral artery and slide the probe laterally to identify fascia iliaca, iliacus muscle, and fascia lata covering sartorius muscle
- Using an in-plane technique, instil 30 - 40 mL of 0.25% levobupivacaine under fascia iliaca (see dosing above)

USS guided femoral nerve block

- Scan transversely in the inguinal crease
- Locate the femoral artery. The femoral nerve is immediately lateral
- Using an in-plane technique, instil 10 mL of 0.5% levobupivacaine around the femoral nerve

**Signs of local anaesthetic toxicity**

CNS: paraesthesia, restlessness, confusion, seizures, coma
Resp: methaemoglobinaemia
CVS: transient hypertension, hypotension, tachycardia, arrhythmias
GI: nausea & vomiting

Management of local anaesthetic (LA) toxicity

Serum LA concentration peaks at 15-30 minutes post injection

- Stop LA infiltration, move the patient to resus
- Call for senior ED and Anaesthetic help
- Assess – ABCDE. Perform a 12 lead ECG
- Treat hypotension with fluid boluses
- Treat seizures with lorazepam 4mg iv or diazepam 10mg iv (decrease dose if hypotensive)
- If QRS interval is prolonged, treat with sodium bicarbonate 8.4% iv
- If torsades de pointes, treat with magnesium 2g iv over 30 mins
Consider intralipid emulsion 20% 1.5 mL / kg iv bolus followed by infusion 0.5 mL / kg / min for 30-60mins (max 500 mL initially)
- Stored in fridge in resus and in theatre 3 (ext 5832)

Lead Author

ED Consultants, Barts Health

Co-Authors / Collaborators

Anaesthetic Consultants, Barts Health

Reference Documents

NICE Guideline CG124: The management of hip fractures, June 2011
New York School of Regional Anaesthesia: USS guided fascia iliaca block, 2013
Toxbase.org – The management of local anaesthetic toxicity, November 2008