

Our purpose

Working together to achieve the healthiest life possible for everyone in Ayrshire and Arran



Fascia Iliaca Compartment Block

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Our values

Caring Safe Respectful

Motivation

- Anaesthetist Dr Joellene Mitchell from acute pain service Ayr hospital produced a guideline to allow Non-medical prescribers (NMP) education & training to perform Fascia Iliaca block (FIB) for patients with Hip Fractures
- Consultant Anaesthetists mentored, trained ANP's to perform FICB & complete competencies as per A&A guideline

G074

Fascia Iliaca block (FIB) for analgesia in patients with fractured neck of femur.

This Guidance relates ONLY to:

- 1) Patients admitted with fractured neck of femur
- 2) Non-medical practitioners deemed competent to perform fascia iliaca blocks who have completed the associated Competency Framework requirements;
 - a) Acute Pain Nurses
 - b) Advanced Nurse Practitioners (Orthopaedics)

Please Note – If you are using a paper copy of this document you must check AthenA to ensure that you have the most up to date version.


Version: 1
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Service: Anaesthetics
Prepared By: Dr Joellene Mitchell, Acute Pain Service
Lead Reviewer: Acute Pain Service
Disseminated: AthenA, E-News

Pre-requisite

- Non-medical prescriber with at least one year prescribing experience
- Advanced Life Support provider
- Follow local FICB guideline
- Completion of FICB competency folder
- Perform 20 FICB supervised by anaesthetist
- MCQ exam on Local Anaesthetic Toxicity (Last)

Achieving FIB competencies

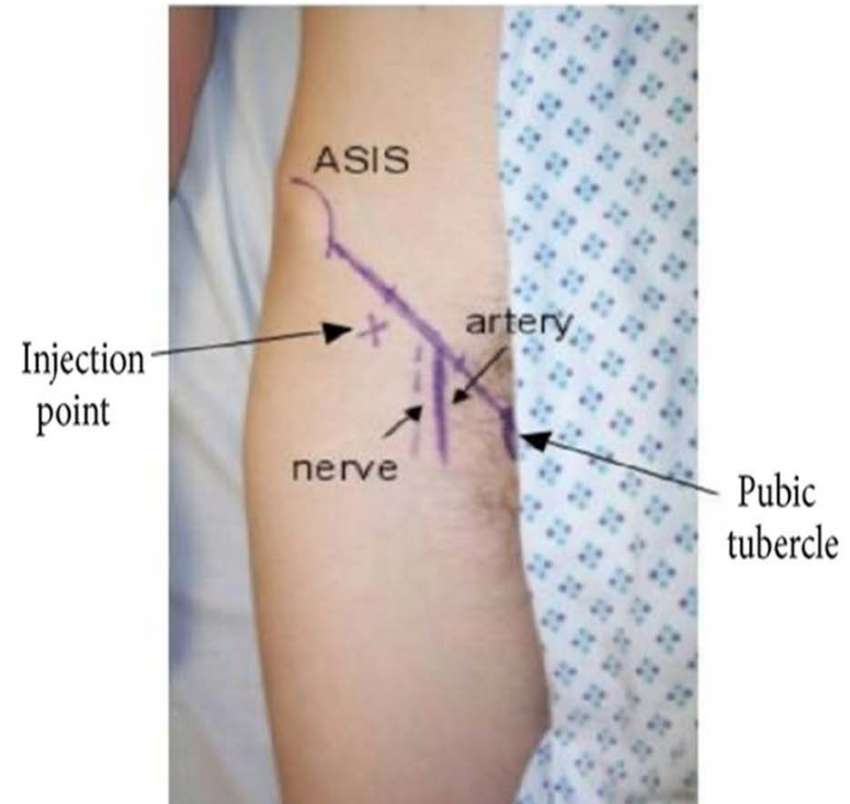
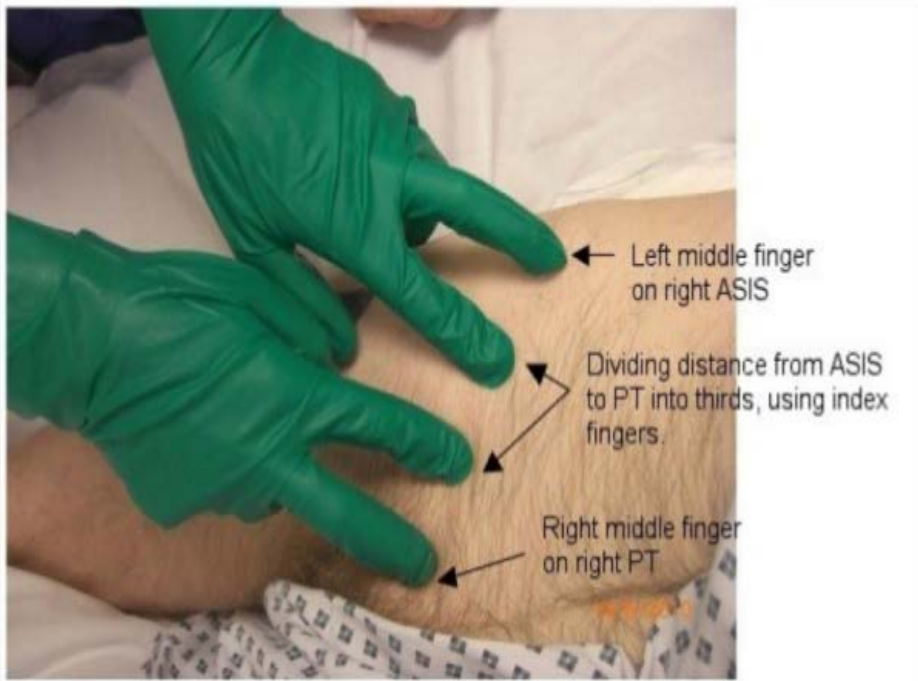
- Each morning checked with receiving ward if any # NOF patients admitted. Discussed with trauma anaesthetist if administering FICB in theatre. 
- Discussion with theatre staff to advise working alongside anaesthetist to attain FICB competencies
- Challenges - recognition & acceptance from theatre staff & provide insight to ANP role.

Contraindications

- Patient refusal
- Patients who have already had a FICB within previous 8hrs
- Known sensitivity to local anaesthesia.
- Anticoagulant therapy (warfarin , clopidrogel,etc)
- Clotting disorder (INR >1.5, platelet count<80
- Previous vascular surgery in affected limb
- Difficulty identifying landmarks

Fascia Iliaca Compartment Block

Landmarks



This compartment allows deposition of local anaesthetic of sufficient volumes spread to at least two of the three major nerves that supply the medial, anterior and lateral thigh with one simple injection, namely the femoral and lateral femoral cutaneous nerves points:

Complications

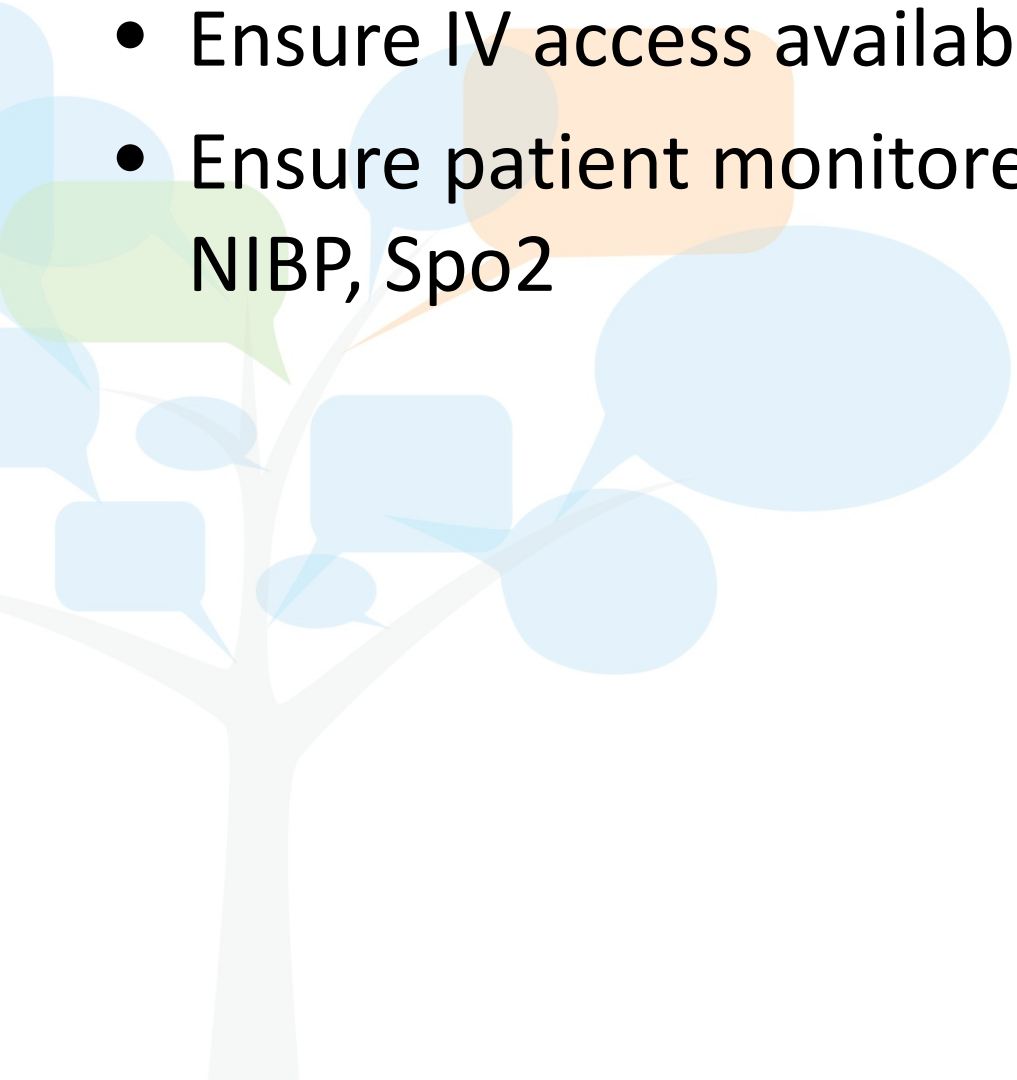
- Intravascular injection
- Local anaesthetic toxicity
- Temporary or permanent nerve damage
- Infection
- Block failure
- Injury secondary to numbness/weakness of limb
- Allergy to any of the preparations used
- Overall a FICB has a very low risk profile.

Complications continued

- Levobupivacaine/chirocaine) significantly reduces the risk of allergic reaction. (Davies 2016)
- Good aseptic technique should reduce the risk of infection
- The injection of high volumes of anaesthetic ensures good spread and improves the chances of success.
- The risk of local anaesthetic toxicity is highest in the first 15-30 minutes which makes close monitoring mandatory at this stage.

Prior to procedure

- Ensure IV access available
- Ensure patient monitored including, ECG, NIBP, Spo2



Equipment

- Dressing pack
- Chloraprep stick 2%
- 18gh Tuohy needle
- 1% lidocaine injection, 5ml syringe
- 20ml x2 syringe
- Orange needle
- Drawing up needle
- 0.25% levobupivacaine injection up to 40mls
- Small dressing

Observations

- Record pain & NEWS score before intervention
- Repeat NEWS & pain score 15min, 30mins, 1hour, 2hours & 4 hours following procedure.
- If pain score is not improved after 30mins ensure additional analgesia is given.
- Remain alert & monitor for respiratory depression, could be prone to this after FICB provides effective pain relief especially if morphine administered within previous 2hrs.

Local Anaesthetic Toxicity

- Observe for any signs of inadvertent intravascular injection such as circumoral tingling, light headedness, visual disturbance, seizures, or arrhythmias.
- Immediately stop local anaesthetic injection
- Commence basic life support. Call for help 2222
- Administer 100% oxygen & resuscitation
- Call anaesthetist for urgent assistance
- Consider Lipid rescue therapy located at bottom of cardiac arrest trolley in ward 2C
- Follow Guideline for Management of Severe Local Anaesthetic Toxicity (AAGBI guideline)

AAGBI Safety Guideline

Management of Severe Local Anaesthetic Toxicity



1 Recognition	Signs of severe toxicity: <ul style="list-style-type: none">• Sudden alteration in mental status, severe agitation or loss of consciousness, with or without tonic-clonic convulsions• Cardiovascular collapse: sinus bradycardia, conduction blocks, asystole and ventricular tachyarrhythmias may all occur• Local anaesthetic (LA) toxicity may occur some time after an initial injection				
2 Immediate management	<ul style="list-style-type: none">• Stop injecting the LA• Call for help• Maintain the airway and, if necessary, secure it with a tracheal tube• Give 100% oxygen and ensure adequate lung ventilation (hyperventilation may help by increasing plasma pH in the presence of metabolic acidosis)• Confirm or establish intravenous access• Control seizures: give a benzodiazepine, thiopental or propofol in small incremental doses• Assess cardiovascular status throughout• Consider drawing blood for analysis, but do not delay definitive treatment to do this				
3 Treatment	<table border="1"><tr><td>IN CIRCULATORY ARREST<ul style="list-style-type: none">• Start cardiopulmonary resuscitation (CPR) using standard protocols• Manage arrhythmias using the same protocols, recognising that arrhythmias may be very refractory to treatment• Consider the use of cardiopulmonary bypass if available</td><td>WITHOUT CIRCULATORY ARREST<p>Use conventional therapies to treat:</p><ul style="list-style-type: none">• hypotension,• bradycardia,• tachyarrhythmia</td></tr><tr><td>GIVE INTRAVENOUS LIPID EMULSION<p>(following the regimen overleaf)</p><ul style="list-style-type: none">• Continue CPR throughout treatment with lipid emulsion• Recovery from LA-induced cardiac arrest may take >1 h• Propofol is not a suitable substitute for lipid emulsion• Lidocaine should not be used as an anti-arrhythmic therapy</td><td>CONSIDER INTRAVENOUS LIPID EMULSION<p>(following the regimen overleaf)</p><ul style="list-style-type: none">• Propofol is not a suitable substitute for lipid emulsion• Lidocaine should not be used as an anti-arrhythmic therapy</td></tr></table>	IN CIRCULATORY ARREST <ul style="list-style-type: none">• Start cardiopulmonary resuscitation (CPR) using standard protocols• Manage arrhythmias using the same protocols, recognising that arrhythmias may be very refractory to treatment• Consider the use of cardiopulmonary bypass if available	WITHOUT CIRCULATORY ARREST <p>Use conventional therapies to treat:</p> <ul style="list-style-type: none">• hypotension,• bradycardia,• tachyarrhythmia	GIVE INTRAVENOUS LIPID EMULSION <p>(following the regimen overleaf)</p> <ul style="list-style-type: none">• Continue CPR throughout treatment with lipid emulsion• Recovery from LA-induced cardiac arrest may take >1 h• Propofol is not a suitable substitute for lipid emulsion• Lidocaine should not be used as an anti-arrhythmic therapy	CONSIDER INTRAVENOUS LIPID EMULSION <p>(following the regimen overleaf)</p> <ul style="list-style-type: none">• Propofol is not a suitable substitute for lipid emulsion• Lidocaine should not be used as an anti-arrhythmic therapy
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4 Follow-up	<ul style="list-style-type: none">• Arrange safe transfer to a clinical area with appropriate equipment and suitable staff until sustained recovery is achieved• Exclude pancreatitis by regular clinical review, including daily amylase or lipase assays for two days• Report cases as follows:<ul style="list-style-type: none">• In the United Kingdom to the National Patient Safety Agency (via www.npsa.nhs.uk)• In the Republic of Ireland to the Irish Medicines Board (via www.imb.ie) <p>If Lipid has been given, please also report its use to the International registry at www.lipidregistry.org. Details may also be posted at www.lipidrescue.org</p>				

Local Anaesthetic Toxicity
ANP,s introduced Intralipids on ward resuscitation trolley alongside AAGBI safety Guideline for administration in event of reaction.

Your nearest bag of Lipid Emulsion is kept.....

This guideline is not a standard of medical care. The ultimate judgement with regard to a particular clinical procedure or treatment plan must be made by the clinician in the light of the clinical data presented and the diagnostic and treatment options available.

Trouble shooting

Problem	Solution
No distinct “pops” felt during needle advancement.	Withdraw needle, check landmarks, change angle to be more perpendicular or cranial.
Hitting bone on needle advancement. Too deep.	Withdraw +/- change angle directing more cranially
Blood on aspiration	Remove needle, apply pressure for 2 minutes. Reattempt directing more laterally
Resistance to injection	Localised slight burning sensation around the injection site is normal, slow your injection rate to ease it.
Pain on injection	Severe pain is not normal. Stop injecting if this occurs
Signs of local anaesthetic toxicity (perioral numbness, tinnitus, dizziness, arrhythmia, seizures)	Stop injecting, call for help, give high flow oxygen, provide life support as required.
No pain relief within 30 minutes	Inject a further 20mls of 0.25% chirocaine, consider alternative pain relief.

Sustaining the Future

- Local agreement for ANPs to prescribe & perform FICB, reducing delays to adequate analgesia
- Teaching & supporting Junior Drs & ANPs training as per A&A FICB guideline
- A&A guideline recommends Drs perform 5 FICB under supervision before attempting one alone
- Audit pain scores pre/post-procedure to inform of benefit/failure of FICB and +/- analgesia requirements.

Summary

- The fascia Iliaca compartment block performed by landmark technique is inexpensive, safe and easy to perform (Davies 2016)
- Delivering large volumes of low concentration local anaesthetic helps to maximize the benefits of the FICB
- It provides effective pain relief whilst avoiding the side-effects of certain other forms of analgesia

Summary

- Incidence & mortality of hip fracture are stabilizing. However, irrespective of age, patients with an increasing number of comorbidities likely to increase costs and have longer hospital length of stay (Soong, C. 2016)
- All staff can contribute to improving outcomes for patients with a painful hip #

References

- Davies N,W.(2016) Fascia Iliaca Compartment Block: Landmark approach guidelines for use in the emergency department version 1.0 June 10, 2016
- Mitchell J, (2014) NHS AAA Fascia Iliaca block (FIB) Guideline for analgesia in patients with fractured neck of femur.
- Rashid A, et al (2014) Regional Analgesia in the Emergency Department for Hip fractures: survey of current UK practice and its impact on services in a teaching hospital. Emerg Med J 2014;31:909–913
- Soong ,C.(2016) Impact of an Integrated Hip Fracture Inpatient Program on Length of Stay and Costs. J Ortho Trauma Vol 30, No 12, Dec. 2016