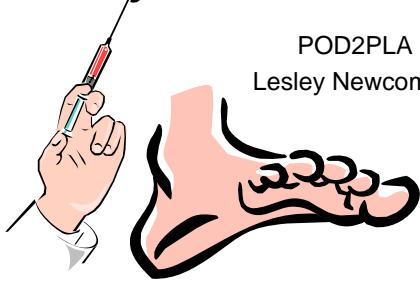


Digital Blocks



POD2PLA
Lesley Newcombe

At the end of this lecture you should be able to:

- List reasons why you would undertake a digital block
- List the most common reasons for undertaking nail surgery
- Describe the two most common digital techniques being hallux block and V Block
- Describe the location of the relevant nerves
- Describe the blood supply to the area
- Explain the process of 'raising a bleb' and the technique of 'aspiration'

Indications

- Nail surgery – most common
- Curettage – most common
- Pain relief
- Diagnostic

Indications for Nail Surgery

- Onychia
- Onychocryptosis
- Involuted nail
- Onychomycosis
- Onychogryphosis
- Subungual pathology

Digital Anaesthetic Techniques

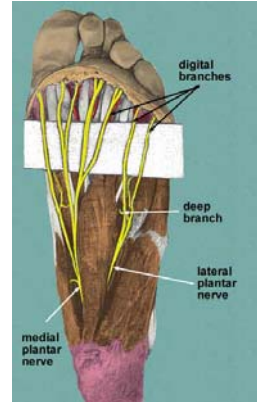
- Bilateral hallux block – most common
- V block – most common
- H block of Frost – less common
- Steinberg – we do not teach

Hallux block

- Hallux block otherwise referred to as dorso-plantar block or bi-lateral hallux block
- Used to induce anaesthesia of the hallux
- Aiming to flood the area around the nerves with LA
- Must consider that there are 4 important target nerves in the hallux

Review nerves of hallux

- Plantar nerves:
- Medial and Lateral plantar Digital nerves



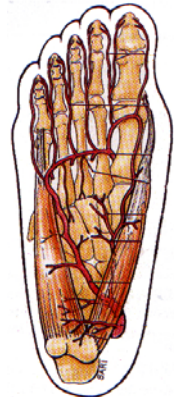
Review nerves of hallux

- Dorsal nerves



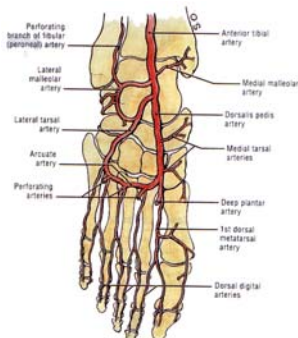
Review blood supply of Hallux

- Plantar view:



Review blood supply of Hallux

- Dorsal



Preparation

- Identify landmarks of 1st MTPJ and 1st IPJ



Preparation

- Find narrow 'fleshy' aspect of digit which corresponds with narrow aspect of proximal phalanx



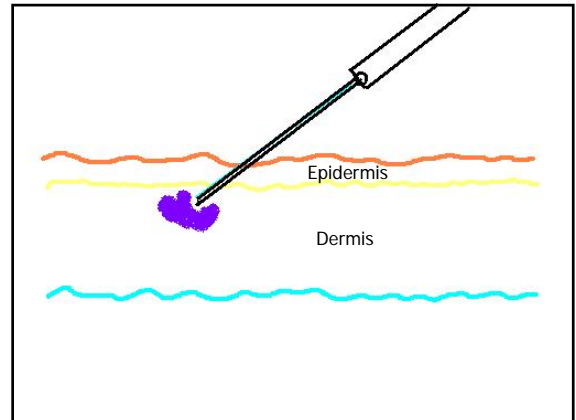
Giving the LA

- Insert the needle at 90° to the skin midway between MTPJ and IPJ
- Raise a bleb to deposit a pool of LA just under the skin
- This reduces discomfort



"Raise a bleb"

- What does this mean?
 - Simply to inject a small amount of LA just under the skin at the point of entry of the needle to reduce discomfort
 - Must ensure you are just under the epidermis as it is very painful if you are in the epidermis due to the extensive nerve endings in the area



Hallux block cont.

- Approx. 0.2 ml at site of injection (bleb)
- Pass inferiorly towards plantar nerve
- Aspirate to ensure you are not in a blood vessel
- Rotate the needle 90 degrees and aspirate again
- Inject approx.. 0.6 ml
- Keep injecting as you withdraw approx.. 0.4ml
- Repeat on other side

Aspirate – what does this mean?

- Aspirate means to draw back or pull back on the plunger of the syringe
- This causes a back pressure
- This is important to ensure that the tip of your needle is not in a blood vessel
- If you are in a blood vessel the barrel of syringe will fill with blood very quickly
- You must discard this solution and start again

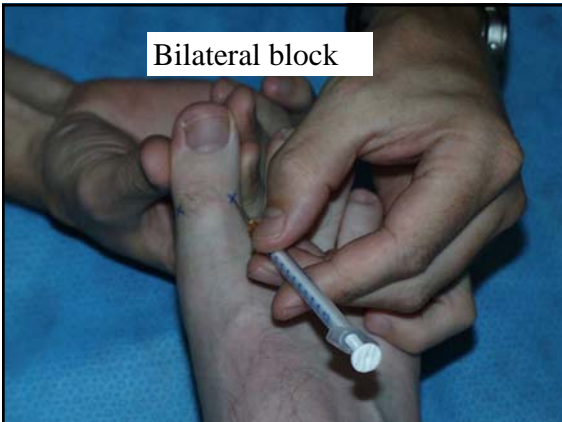
When to aspirate?

- Whenever your needle is stationary in the tissue and you are ready to inject
- Even if blood vessels are small in the area it is a good habit to get in to
- Aspiration in the digits is not so essential, however, when injecting near larger vessels, i.e. ankle block – it is VITAL that aspiration prior to injection occurs. Injection into a major blood vessel can cause toxic reaction and death.

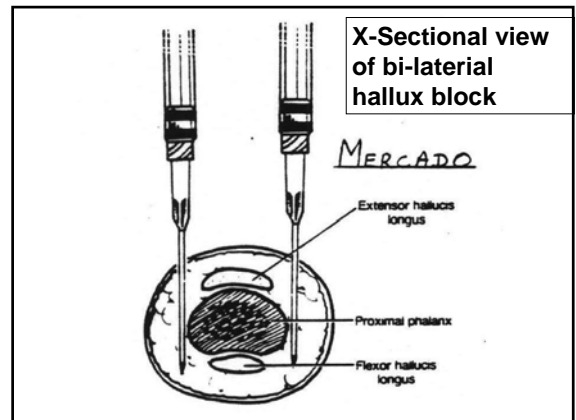
Hallux block

- Approx. equal volumes for both dorsal and plantar nerves
- Tibial side can be more painful
- Volume between 1.5-4ml depending on the age of patient and size of digit

Bilateral block



X-Sectional view of bi-lateral hallux block



Lesser toe block

- Bilateral or V block
- 1-2.5ml volume
- V block: insert needle centrally over mid point of proximal phalanx
- Raise large bleb approx.. 0.5ml
- Direct obliquely at 45 degree angle to pass down each side to plantar nerves. Aspirate then inject 0.4ml each side

V Block

