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Popliteal Sciatic Nerve block

SCHOOL OF MEDICINE
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UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS

Indications

- lower leg, ankle, foot surgeries
- Analgesia following knee surgery- "posterior" pain

Coverage

- Sciatic nerve block results in anesthesia of the entire lower limb below the knee, both motor and sensory, with the exception of a variable strip of skin on the medial leg and foot, which is the territory of the saphenous nerve (femoral)

Area of coverage

Lateral sural cutaneous

Sural

Lateral sural cutaneous

Superficial peroneal

Sural

What is missed by the block?

Saphenous

Saphenous Nerve in Saphenous Neuralgia

Saphenous, med. orural cut. (L3-4)

Sup. peroneal (L4-S1)

Medial sural cut. Sural (S1-2)

Tibial, medial calcaneal (S1-2)

Lateral dorsal cut. Lateral calcaneal

Sup. peroneal (L4-S1)

Sural, lateral dorsal cut. (S1-2)

Deep peroneal (L4-5)

The "Old Way"



Advantage to Ultrasound

- The anatomy of the sciatic nerve as it approaches the popliteal fossa is quite variable, and the division into the tibial nerve (TN) and common peroneal nerve (CPN) occurs at a variable distance from the crease
- Use of ultrasound allows for the reduction in the dose used since the injection can be halted once adequate spread is documented

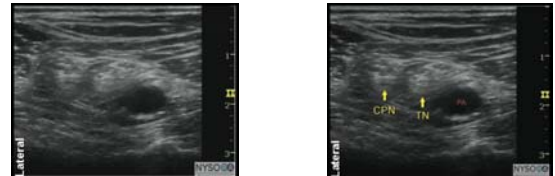
Ultrasound

- Patient Position- Can be done supine, prone or lateral
 - I prefer supine with the leg elevated as it involves much less patient positioning



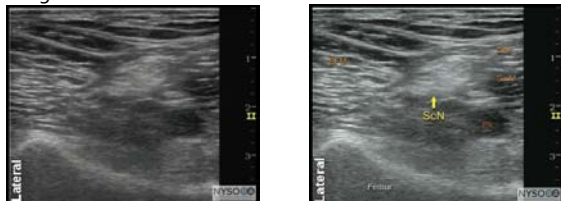
Where to start?

- In the popliteal crease with the probe oriented transversely, depth 3-4 cm. Should be superficial to popliteal artery
 - Note the image is 180° from "normal" orientation



Next step

- Slowly move the probe proximally until the TN and CPN merge to form the Sciatic Nerve



Needle Entry



Injection

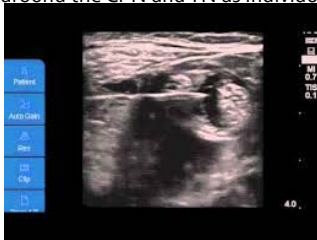


Trouble Locating the nerves?

- Slowly slide the probe proximally and distally starting from the popliteal crease.
 - Looking for two structures (TN & CPN) which merge as you move proximally and diverge as you move distally

I can see them distally, but lose them as I move proximally

- OK to inject around the CPN and TN as individual blocks



Three Pearls: Popliteal Sciatic

- Start in the Popliteal crease, find popliteal artery
- Tibial nerve sits superficial, scroll up until Common peronea joins from lateral side
- When you have found nerve, convince yourself that TN and CPN are coming together by scanning proximal and distal



<http://keyweb.com/au/kep-content1/upload/2012/03/popliteal-pre-block-us-and-anatomy.jpg>