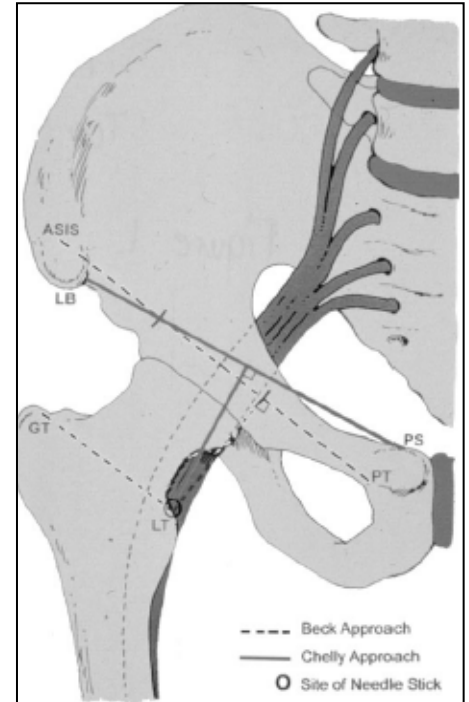


Sciatic Nerve Block: Indications & Methods

Anesthetic Pearls: Anesthetic Implications, Indications, and Methodology of the Sciatic Nerve Block

Anatomy:

- Nerve roots L4-5 to S1-3
- Largest of 4 peripheral nerves of lower extremity (~ 2 cm diameter pelvic rim)
- Course: Passes through sacrosciatic foramen beneath piriformis muscle
- Lies between greater trochanter of femur and ischial tuberosity
- Becomes superficial at lower border of gluteus maximus muscle
- Descends down posterior aspect of thigh to popliteal fossa
- Supplies: sensation to posterior thigh, all of leg / foot below knee except thin strip by Saphenous nerve on medial leg / ankle



Sciatic Nerve Block Indications:

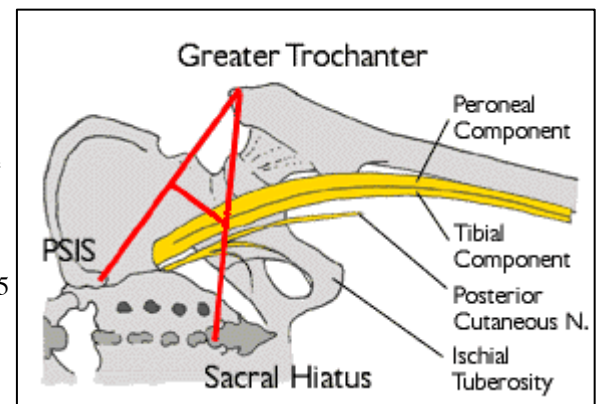
- Surgery below knee not requiring tourniquet
- In combination with other blocks for surgery on thigh
- In combination with general anesthesia for post-op analgesia
- Advantage of sciatic nerve block: Avoidance of sympathectomy of spinal & epidural anesthesia

Sciatic Nerve Block Techniques:

- Anterior & posterior approaches
- Anterior approach requires a long needle
- Posterior approach requires lateral or prone patient position
- Nerve stimulator technique is extremely useful for this block
- U/S can be helpful for posterior, lateral, and sub-gluteal block placement

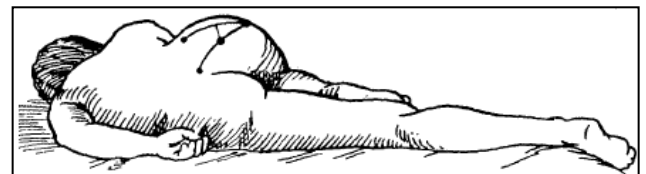
Anterior Sciatic Nerve Block Technique (Beck): (supine position)

- May be combined with femoral 3-in-1 block for "complete" block of leg
- 1. Line drawn from Anterior Superior Iliac Spine (ASIS) to pubic tubercle
- 2. Second line parallel to above line at greater trochanter
- 3. Needle inserted at point where perpendicular line from junction of middle and medial thirds of upper line crosses second line, with slight lateral angulation
- 4. Needle advanced until on bone (lesser trochanter)
- 5. Needle is redirected medially (walk off lesser trochanter) and advanced ~5 cm
- 6. If nerve stimulator is used, elicit foot movement at < 1 mAmp.
- 7. 20-30 cc local anesthetic injected incrementally (after aspiration)



Anterior Sciatic Nerve Block Technique (Chelly): (supine position)

1. Line drawn from ASIS to pubic symphysis
2. Perpendicular bisector drawn 8 cm down
3. Needle advanced with nerve stimulator until sciatic response elicited
4. 20-30 cc local anesthetic injected incrementally (after aspiration)



Posterior Sciatic Nerve Block Technique: (lateral "Sims" position)

1. Line drawn from Posterior Superior Iliac Spine (PSIS) to greater trochanter (GT) of femur
2. Second line drawn from greater trochanter (GT) to sacral hiatus (SH)
3. Perpendicular line drawn bisecting first line (PSIS to GT), 5 cm caudad and intersecting GT to SH line
4. Needle insertion where perpendicular line crosses second line
5. Advance needle until Sciatic nerve is stimulated or bone encountered (if bone, walk needle medial to lateral)
6. Nerve stimulator will elicit foot movement (inversion or eversion) (good results < 1 mAmp)
7. 20-30 cc local anesthetic injected incrementally (after aspiration)