REGIONAL ANESTHESIA
ULTRASOUND-GUIDED NERVE BLOCKS

REFERENCE (3)

GENERAL POINTERS on TECHNIQUE:
- In cross-section on ultrasound nerves looks like honey-comb cereal
- Find blood vessels and use color Doppler to localize associated nerves
- Best find the nerve in cross-section & approach with needle-in-plane; some blocks can be done out-of-plane; to see the needle well, avoid steep needle angles in-plane
- Pop the fascial plane - tight needle-tip-to-nerve proximity is not as important, if you are within the right fascial plane

• TIPS: identify subclavian artery lying on the first rib; the plexus is immediately lateral and superficial to it.
• PITFALLS: keep needle tip always in sight to avoid pneumothorax, and don’t point below the first rib
• INJECTION VOLUME: 20-25 mL

• TIPS: identify axillary artery; musculocutaneous nerve is distant from the plexus bundles.
• PITFALLS: there are multiple vessels in this area - avoid intravascular injection
• INJECTION VOLUME: 15-20 mL

• TIPS: identify femoral artery; femoral nerve is lateral to it; pop the iliac fascia, target the nerve prior to bifurcation of the femoral artery
• PITFALLS: beware of motor weakness of quadriceps - fall risk!
• INJECTION VOLUME: 10-20 mL

• TIPS: identify greater trochanter and ischial tuberosity; sciatic nerve can be seen between them
• PITFALLS: may need to inject more distally or in long axis of the nerve
• INJECTION VOLUME: 15-20 mL

• TIPS: identify popliteal vessels; inject at confluence of CPN & TN; scan after injection to ensure spread
• INJECTION VOLUME: 20 mL

• Deposit a small amount of local anesthetic to hydro-dissect the nerve from its surrounding tissues - this hydrolocalization technique will help you see it better
• Flush the needle with local anesthetic prior to injection, in order to avoid injecting air and resultant poor image quality from artifacts caused by air
• Local anesthetics are lipophilic - do not simply deposit into surrounding fat tissue

LINEAR PROBE IS PREFERRED

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