Regional Anesthesia Conundrums

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Summary

*Regional Anesthesia Conundrums* will be an interactive session designed to explore several “hot topics” in regional anesthesia and acute pain medicine. The presentation will focus on three practical and clinically-relevant case scenarios that each focus on an important topic for discussion. Each discussion point could be answered (theoretically) with opposing viewpoints while remaining within the standards of clinical care. Literature will be provided for each “opposing view” – with the attendees deciding which viewpoint most represents their clinical practice.

The following discussion points and associated literature will be reviewed with meeting participants:

1. Femoral Nerve Blockade vs. Adductor Canal Blockade

Adductor canal block versus femoral nerve block for analgesia after total knee arthroplasty: a randomized, double-blind study.

The effects of ultrasound-guided adductor canal block versus femoral nerve block on quadriceps strength and fall risk: a blinded, randomized trial of volunteers.

Adductor canal block: more than just the saphenous nerve?

Continuous femoral nerve blocks: varying local anesthetic delivery method (bolus versus basal) to minimize quadriceps motor block while maintaining sensory block.

The saphenous nerve and its relationship to the nerve to the vastus medialis in and around the adductor canal: an anatomical study.

The effects of ultrasound-guided adductor canal block versus femoral nerve block on quadriceps strength and fall risk: a blinded, randomized trial of volunteers.

Early quadriceps strength loss after total knee arthroplasty. The contributions of muscle atrophy and failure of voluntary muscle activation.

The impact of analgesic modality on early ambulation following total knee arthroplasty.
2. Spinal Stenosis and Neuraxial Blockade

The impact of general and regional anesthesia on the incidence of post-operative cognitive dysfunction and post-operative delirium: a systematic review with meta-analysis.

Perioperative comparative effectiveness of anesthetic technique in orthopedic patients.

Serious complications associated with spinal and epidural anaesthesia in Finland from 2000 to 2009.

Neuraxial blockade in patients with preexisting spinal stenosis, lumbar disk disease, or prior spine surgery: efficacy and neurologic complications.

Neuraxial blockade in patients with spinal stenosis: between a rock and a hard place.

Epidural pressure and its relation to spread of anesthetic solutions in epidural space.


Changes in epidural pressure during walking in patients with lumbar spinal stenosis.
Takahashi K, Kagechika K, Takino T, Matsui T, Miyazaki T, Shima I.

3. Dexamethasone and Peripheral Nerve Blockade

Effect of dexamethasone on the duration of interscalene nerve blocks with ropivacaine or bupivacaine.

Peripheral nerve injection injury with steroid agents.

Dexamethasone topically accelerates peripheral nerve repair and target organ reinnervation: a transected sciatic nerve model in rat.

Dexamethasone added to mepivacaine prolongs the duration of analgesia after supraclavicular brachial plexus blockade.

Duration of upper and lower extremity peripheral nerve blockade is prolonged with dexamethasone when added to ropivacaine: a retrospective database analysis.

Future considerations for pharmacologic adjuvants in single-injection peripheral nerve blocks for patients with diabetes mellitus.
I.V. and perineural dexamethasone are equivalent in increasing the analgesic duration of a single-shot interscalene block with ropivacaine for shoulder surgery: a prospective, randomized, placebo-controlled study.

Impact of perioperative dexamethasone on postoperative analgesia and side-effects: systematic review and meta-analysis.

Neurotoxicity of adjuvants used in perineural anesthesia and analgesia in comparison with ropivacaine.