Workshop: Advanced Ultrasound Guided Regional Anesthesia

Disclosures

- No commercial interests to disclose
- This introduction may include trade names of companies or products. This is not intended to be an endorsement, but merely a discussion of examples of available products.

Learning Objectives

- “Advanced Blocks”
- Indwelling Catheters
  - Evidence for use
  - Types of catheters

Advanced Blocks

- Spine and paravertebral
- Fascia-iliacus & Lateral Femoral Cutaneous (LFC)
- Abdominal Wall Blocks
  - Transversus Abdominis Plane (TAP)
  - Rectus Sheath
  - Iliinguinal
  - Intercostal

Advanced Blocks

- Indwelling Catheters for
  - Femoral/Saphenous or Adductor Canal
  - Sciatic/Popliteal or Infragluteal
  - Brachial Plexus
  - Paravertebral
  - Abdominal Wall
  - Wherever there is a sensory nerve you can visualize?
Indwelling Peripheral Nerve Catheters

Evidence for Use

• 19 articles show higher patient satisfaction, lower total opioid consumption, reduced nausea and vomiting
• Quality of postoperative pain is (per patient report) directly correlated with quality of recovery
• Meta analysis of RCT’s comparing systemic opiates and peripheral nerve blockade (continuous) evaluated
• Class 1a evidence


Continuous Interscalene Block in Patients Having Outpatient Rotator Cuff Repair Surgery: A Prospective Randomized Trial

Evidence for Use

From the Departments of Anesthesiology and Orthopaedics, St. Luke’s Roosevelt Hospital Center, Columbia University College of Physicians and Surgeons, New York, New York.
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Findings:

• “The analgesic benefits of CISB found in the PACU and immediately after discharge extend through the intermediate recovery period ending on postoperative day 7.”
• Highest pain numeric rating scale (worst pain score) was substantially lower in the continuous group (CISB) vs. the single shot (SISB) or GA only group
• Most patients in CISB and SISB were fast-tracked to discharge, no GA patient was
• Length of Stay in PACU (minutes):
  – CISB (20±31)
  – SISB (30±42)
  – GA (165±118)

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Continuous Interscalene Brachial Plexus Block via an Ultrasound-Guided Posterior Approach: A Randomized, Triple-Masked, Placebo-Controlled Study

Findings:

Compared to a Single Injection Interscalene Block, a 2-day continuous posterior interscalene block:
• Provides greater pain relief:

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Acute Pain Summit 2005

“Use of Peripheral Analgesic Techniques Leads to Improved Patient Outcomes”
Findings:

Compared to a Single Injection Interscalene Block, a 2-day continuous posterior interscalene block:

- Reduces opioid consumption (67% in Continuous ropivicaine group received no opioids vs. 13% in placebo group)
- Improved sleep quality
- Increased patient satisfaction

Pediatric Ambulatory Perineural Catheters

**Ambulatory Continuous Peripheral Nerve Blocks in Children and Adolescents: A Longitudinal 8-Year Single Center Study**

![Image](image-url)

**Findings:**

- Improved intra-operative cooperation as reported by surgeon
- Decreased requirements for intra-operative propofol
- Decreased post-operative pain in the home environment (no PVB patient required rescue analgesics)
Types of Catheters:

Through-the-Needle vs. Over-the-Needle
Through-the-needle catheter sets

Supposed Benefits:
- One hand placement
- Catheter threaded under ultrasound visualization
- Less leakage at skin puncture site
- No clamp-on adapter
- Larger catheter more easily identified on ultrasound

Over-the-needle Catheter

My catheter is in....now what?

Infusion Pumps:
- Disposable vs. Reusable

On-line Resources

- NYSORA
- neuraxiom.com
- BlockJocks.com