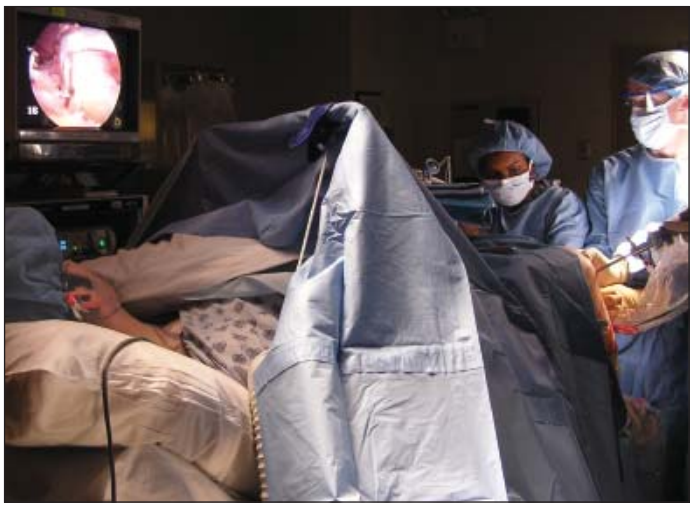
Tips for Managing Orthopedic Regional Anesthesia Patients

By Richard L. Kahn, MD, New York City

Nothing gives patients a "leg up" on recovery like regional anesthesia. At the Hospital for Special Surgery, where we perform more than 15,000 orthopedic procedures a year, it helps pre-empt and control post-op pain, shortens recovery time, reduces opioid use, improves physical therapy, and eliminates unwanted side effects of general anesthesia, including PONV, sore throat and cognitive dysfunction.

But switching to regional anesthesia is not simple. To do it effectively, the entire surgical team needs to acquire new expertise and adopt new procedures. Here are some practical tips for nurses who manage orthopedic regional anesthesia patients.



A blocked patient watches his procedure on video in real time at the Hospital for Special Surgery Ambulatory Surgery Center.

Educate. Patient education is critical before, during and after surgery. During the pre-op visit, we explain how regional anesthesia works and establish realistic expectations. We go over the block's expected duration and the importance of multimodal analgesia for containing pain as the block wears off (e.g., NSAIDs, cryotherapy, acetaminophen). We explain that the insensate extremity will be vulnerable to injury from trauma, over-icing and over-heating. We provide written, take-home materials discussing icing duration and limb protection. If an upper limb will be immobile, we warn that the ulnar nerve may be susceptible to pressure ischemia. If a lower extremity or hand is involved, we emphasize elevation to minimize pain and swelling. Postoperatively, we re-teach these concepts.

Monitor. The nursing team must remain vigilant for toxicity. Intravascular injection can occur with any practitioner and any block. Pre-seizure CNS excitation, tonic-clonic seizures or cardiac arrest can result. Be prepared to follow ACLS protocol (without lidocaine injection, which can cause further toxicity).

Interscalene blocks affect phrenic nerve and hemidiaphragm functions in all patients; significant numbers will sense an inability to take a deep breath and/or experience shallow breathing. Although most do well with oxygen saturation monitoring and reassurance, consider administering an intra-op anxiolytic to anxious patients. If this dyspnea continues post-operatively, order a chest X-ray; the needle could have inadvertently penetrated the lung, causing pneumothorax. Many patients will also be hoarse, with a temporary loss of the gag reflex. Start with sips of water to ensure correct swallowing.

Spinal/epidural blocks can trigger rapid-onset hypotension and severe bradycardia, rarely leading to cardiac arrest. Stay attuned to complaints of nausea or dizziness and be prepared for immediate treatment.

Support. Patients usually go home while blocks are still in effect, requiring adjunctive support. Patients who undergo a femoral nerve block may need a leg brace or a companion during ambulation. Brachial plexus blocks necessitate protection of the ulnar nerve at the elbow.

Shifting to regional anesthesia requires a changed approach to patient management—and this is no easy task. But in our experience, the benefits—happier, easier-to-manage patients—make it all worthwhile.

Dr. Kahn is Medical Director of Ambulatory Surgery with the Hospital for Special Surgery, where he has specialized in regional anesthesia since 1987. He is also Clinical Assistant Professor of Anesthesiology with the Weill Medical College of Cornell University.