

From Neck to Nerve Roots: Combining Quadratus Lumborum and Interscalene Regional Anesthesia for a Pediatric Ewing’s Sarcoma Resection



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Introduction:

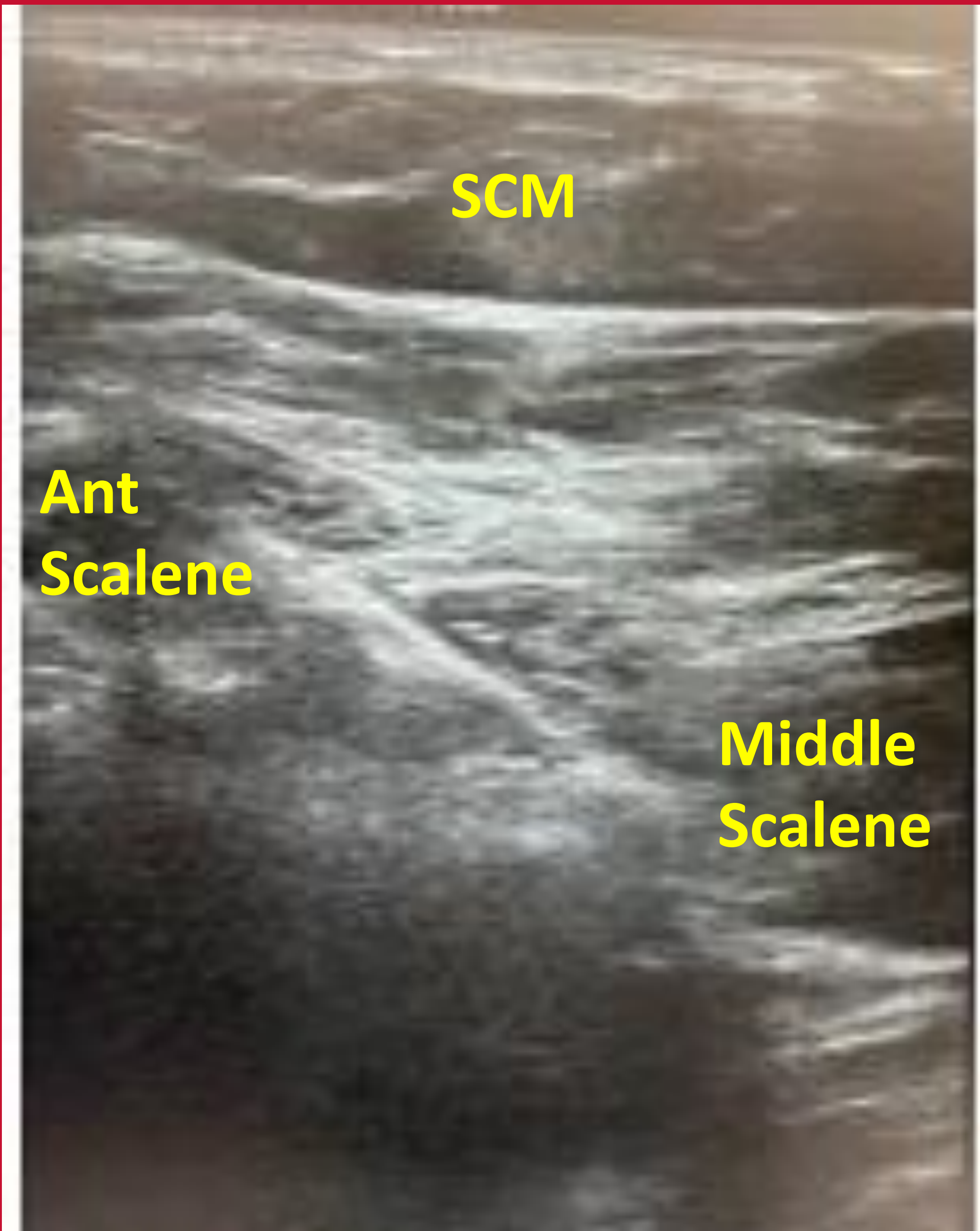
Regional anesthesia plays a pivotal role in optimizing perioperative pain management, minimizing opioid use, and facilitating recovery. An understanding of individual nerve root anatomy and its relationship to specific regional blocks is essential for achieving targeted and effective analgesia.

The interscalene block primarily anesthetizes the upper cervical nerve roots (C5–C7), providing coverage for shoulder and upper extremity procedures, while the quadratus lumborum (QL) block involves spread to the thoracolumbar nerves (T7–L1), offering analgesia to the abdominal and lower thoracic regions. By addressing distinct yet complementary dermatomal distributions, combining these techniques can enhance multimodal analgesia and reduce the need for systemic opioids.

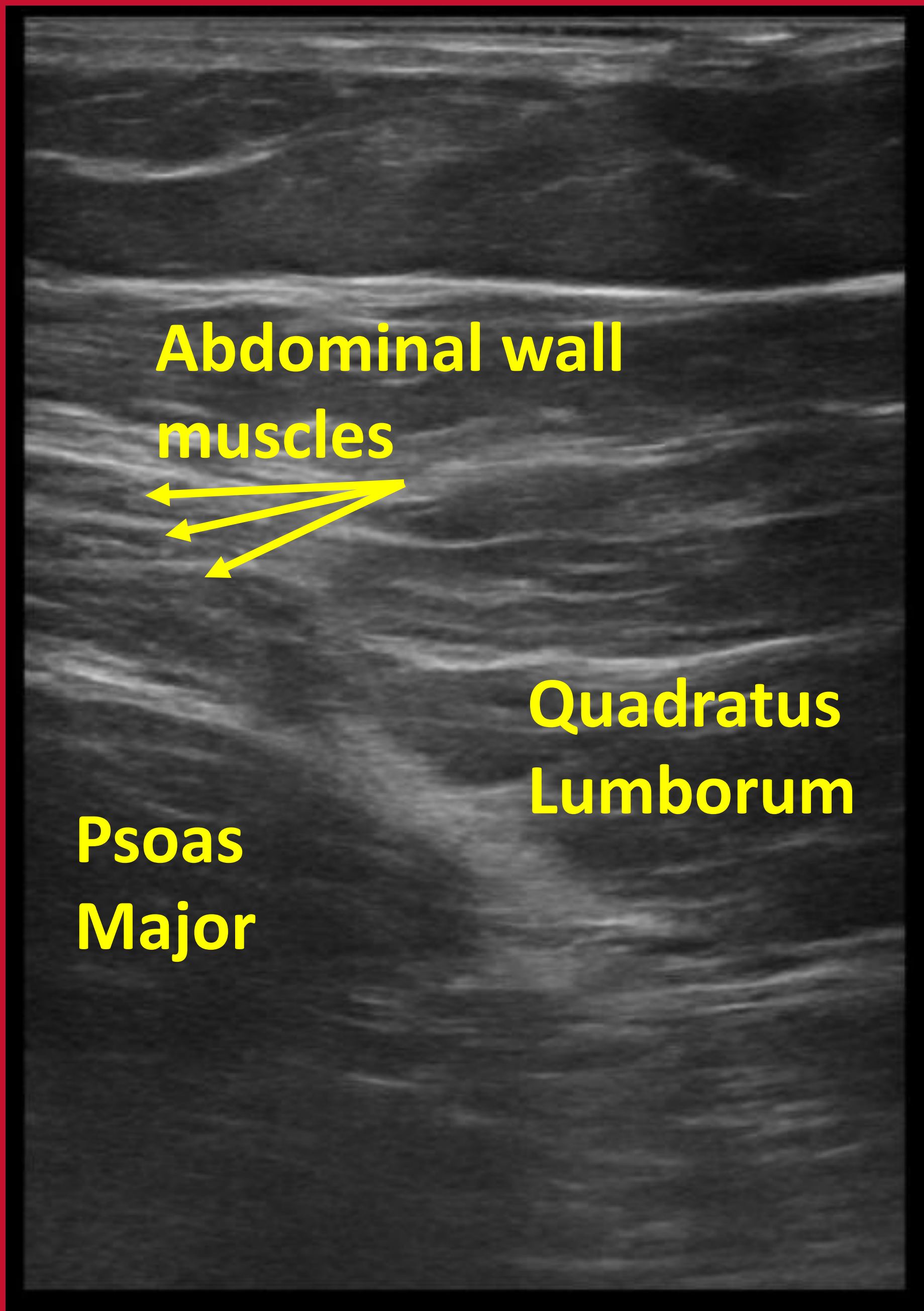
A comprehensive understanding of cervical and thoracolumbar nerve root anatomy allows anesthesiologists to refine block selection, improve precision, and expand the use of regional techniques to achieve optimal perioperative pain control across a wide range of surgical procedures.

Combining quadratus lumborum and interscalene blocks optimizes perioperative pain control, reduces opioid use, and enhances recovery in pediatric oncologic surgery

Interscalene Nerve Block



Quadratus Lumborum Block



Case Presentation:

A 9-year-old male with Ewing Sarcoma of the right humerus underwent tumor resection with open reduction internal fixation (ORIF) and iliac crest autografting. Given the dual surgical sites and anticipated postoperative pain, a regional anesthesia strategy was employed using a preoperative interscalene perineural catheter (PNC) and a single-shot quadratus lumborum (QL) block. The interscalene catheter provided targeted anesthesia to the shoulder and upper arm, while the QL block was used to cover the iliac crest donor site. The patient tolerated the procedure well with no intraoperative complications. Postoperatively, he experienced excellent analgesia, required minimal systemic opioids, and had a smooth recovery. This case highlights the effective use of regional anesthesia to manage perioperative pain in pediatric oncology patients undergoing complex surgeries involving multiple anatomic regions.

Discussion:

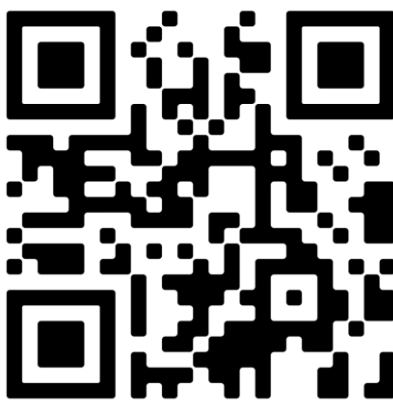
The combined use of QL and interscalene blocks represents a novel approach to multimodal analgesia in pediatric patients undergoing complex oncologic and orthopedic surgery. While each block is well-established individually, their dual use remains underreported, especially for procedures involving both shoulder and pelvic regions. This case demonstrates the feasibility and safety of a dual-block strategy to achieve effective, opioid-sparing analgesia.

References:

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