A case of a fascia iliaca block as an alternative analgesic option for hip fractures in a limited resource setting

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Introduction:

Goals of care for elderly patients suffering from hip fractures include minimizing side effects of narcotics, optimizing respiratory mechanics, and promoting early mobilization in the postoperative period in order to reduce cardiopulmonary complications. Neuraxial anesthesia and analgesia is the standard of care in many institutions for this patient population. When neuraxial placement is contraindicated, the alternative is commonly a multimodal analgesic regimen that involves parenteral opioids. In the particular setting of Sri Guru Ram Das Medical Center (Amritsar, Punjab, India), however, anesthesiologists regularly practice without access to narcotics due to strict regulations on controlled substances implemented in response to the opioid epidemic in the state of Punjab. Thus, postoperative pain control presents a significant challenge for such institutions. We present a case where a landmark-based fascia iliaca block was utilized for effective perioperative analgesia in a patient for whom epidural maintenance postoperatively was contraindicated.

Case report:

The patient was a 80 year old female with a past medical history significant for atrial fibrillation, rate-controlled, on warfarin, and congestive heart failure, who presented a week prior with acute onset of right hip pain following a mechanical fall. The patient was diagnosed with an intertrochanteric fracture and was scheduled for hip fracture repair with an intramedullary nail. In the preoperative period, the patient developed acute on chronic heart failure and underwent medical optimization with diuresis. Anticoagulation was maintained with a heparin infusion, which was held accordingly prior to the scheduled operation.

In coordination with the anesthesia and surgical teams, the anesthesia plan was to (1) place an epidural that was to be discontinued postoperatively, such that anticoagulation could be restarted promptly, and (2) perform a fascia iliaca block for postoperative pain management.

Upon arrival to the operating room, an epidural was placed in the L3-4 interspace and was gradually dosed with a total of 15 milliliters of lidocaine with epinephrine 1:200,000 to establish adequate surgical conditions. A Tuohy needle was used to perform the fascia iliaca block, which offered tactile feedback of the characteristic "double-pop" through the fascia lata and fascia iliaca, respectively. Twenty milliliters of bupivacaine 0.5% was then deposited below the fascia iliaca, with hopes of covering the lateral femoral cutaneous nerve, while having minimal spread to the femoral nerve.
Intra-operatively, the patient remained sedated with meaningful contact. No analgesics were administered intraoperatively aside from a single dose of acetaminophen 1000mg IV. At the end of the procedure, the epidural was discontinued and the patient was brought to the recovery area.

In this particular hospital, patients are required to preemptively purchase medications that are required in their medical care. When interviewing this patient regarding her postoperative experience, she stated that her pain was tolerable postoperatively--rating it at 3-4/10--and that she did not plan on purchasing further medications (e.g. acetaminophen, NSAIDs) during her recovery. The patient reported decreased sensation in the anterior and lateral thigh, but could not appreciate quadriceps weakness.

Protracted hospital stays after surgery are uncommon following orthopedic procedures at this hospital. The patient was sent home to recover under observation of family members on postoperative day 3.

Discussion:

Regional anesthesia has proven to not only positively impact patient satisfaction, but is also a cost-effective method of optimizing the perioperative experience. Typical postsurgical goals of care include minimizing side effects of narcotics, optimizing respiratory mechanics, and promoting early mobilization in order to reduce cardiopulmonary complications—all of which can be facilitated by regional anesthetics. As this case illustrates, fascia iliaca block may provide effective analgesia in the elderly population suffering hip fractures, particularly as part of an opioid-sparing technique or when they are not available.