PERICAPSULAR NERVE GROUP BLOCK (PENG) FOR POSTOPERATIVE ANALGESIA FOLLOWING FEMORAL NECK FRACTURE SURGERY (DYNAMIC HIP SCREW)

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Background and Aims

Femoral neck fracture is a common traumatic injury in the elderly associated with significant morbidity. The average reported pain intensity is moderate to severe and peripheral nerve blocks are the medical intervention with the greatest analgesic efficacy. Traditionally, femoral nerve, iliac fascia and lateral cutaneous nerve block are performed in this surgical population and are associated with moderate reductions in Visual Analogic Scale pain scores.

Taking into account recent anatomic studies, Giron-Arango et al. described the use of a new ultrasound-guided regional block directly targeting the articular branches of the femoral nerve and the accessory obturator nerve which seem to carry most of nociception of the joint. This technique was performed on 5 patients with dramatic pain improvement.

Methods

A 70 year old female ASA III patient presenting with an intertrochanteric hip fracture was submitted to a dynamic hip screw osteosynthesis under spinal anesthesia.

Post-surgery, an ultrasound-guided PENG block was performed using 15ml of ropivacaine 0,375% for postoperative analgesia and pain scores during the following 24h were registered.

Analgesia was supplemented with Acetaminophen and Metamizol. No opioid analgesics were used postoperatively.

Results

During the next day, the patient reported no resting pain and a dynamic Visual Analogue Scale pain score of 2 out of 10.

Conclusions

The PENG block seems to be an effective pericapsular block with greater analgesic potency than peripheral nerve blocks traditionally used for postoperative analgesia following hip surgery. It also provides a way to reduce opioid administration in this surgical population.

Image 1: Sonoanatomical references for PENG block

Image 2: Needle placement during PENG block

Sources:

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