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Meralgia paresthetica after pelvic fixation in a polytrauma patient.

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- Letter to the Editor -

Approximately half the patients admitted to intensive care units (ICUs) experience moderate to severe pain during their stay [1]. Regional analgesia has been underused in ICUs, despite the well-known importance of pain control in admitted patients, and the available evidence on its efficacy and good safety profile. A review about regional analgesia techniques for pain management in patients admitted to the ICU has been recently published [2].

Critical trauma patients usually have several injuries that are the cause of severe pain; some blocks have been study in this subset of patients [3], but this is the first case published about ultrasound guided infiltration of lateral femoral cutaneous nerve (LFCN) in a critical care patient.

Meralgia paresthetica is an entrapment neuropathy of the LFCN, characterized by paresthesia and numbness at the anterolateral side of the thigh. It has also been described in an avulsion-fracture of the anterior superior iliac spine [4] and recently in two prone positioned patients to treat COVID-19-associated acute respiratory distress syndrome (ARDS)[5].

We present a 57-year-old male patient who was transferred to the emergency department of the General Hospital of Valencia after suffering a crush while he was working, having been trapped by a truck. After a physical examination and a computed tomography scan, a pelvic fracture, bladder injury, and perisplenic hematoma were observed, probably related to a contained subcapsular rupture of the spleen. Initially, an exploratory laparotomy was performed, four liters of blood were
evacuated, and splenectomy was performed. In addition, a tear of the sigmoid mesocolon was observed with bruising and active bleeding, and it was decided to resect it. A massive transfusion of blood products was performed and he was transferred to the ICU. In a second half the next day, another intervention by traumatology team was performed to treat the pelvic fracture (left iliac fracture reaching the ipsilateral sacroiliac joint with diastasis of the same, multiple sacral fractures with involvement of the right sacroiliac joint, comminuted fracture of the left ischiopubic and iliopubic branches that extends to the ipsilateral acetabulum). An Orthofix® fixator was placed and removed after the fracture had healed 56 days later. Admission to the ICU was prolonged, remaining sedated during the moments of greatest instability, and later in weaning from the ventilator and progressive rehabilitation. During the last phase of admission, the patient reported severe pain numerical rating scale (NRS) 8-9 that worsened with mobilization. The pain remained severe despite the treatment regimen with continuous infusion of oxycodone at 8 mg/h, fentanyl 75mcg/h in patch, pregabalin 75mg/12h and acetaminophen 1g/8h. On examination, the patient expressed localized pain on the outer face of the right thigh from the iliac crest to the middle third of the thigh. The main suspicion was the lesion of the LFCN during the surgeries for the placement and removal of the pelvic fixator (Fig 1A), as any of the pelvic fractures itself is associated with the anatomy of the LFCN. The X-ray shows the pelvic fixator placed on the patient (Fig 1B).

Ultrasound-guided infiltration of the right femoral cutaneous nerve was performed (Fig 1C). Levobupivacaine 0.5% 10 ml and triamcinolone 40 mg were administered. One hour after the blockade, the patient presented an improvement of > 75%, shifting from NRS 9 to NRS 2. This improvement allowed the reduction of oxycodone from 8 to 6 mg/h 1 hour post-block; from 6 to 3 ml/h 3 hours post block; from 3 to 1 ml/h 6 h post block; and then its final withdrawal 1 day later. The patient maintained stability in pain relief, with NRS 3 at 48h after LFCN block. The technique was
repeated 4 days later. One week later, the patient's NRS remained at 3. Pain control during the period between the blockade and discharge from the ICU kept the patient comfortable and made it possible to avoid the administration of high-dose opioids.

Ultrasound guided regional analgesia techniques must be incorporated in the ICU care portfolio, for daily practice of anesthesiologists and intensive care physicians. They provide excellent pain control in lots of situations where high opioid doses are needed, avoiding the side effects and dependence phenomena associated with opioids.
References


Fig. 1. (A) Representation of the lateral femoral cutaneous nerve in relation to the pelvic fixator. (B) X-ray with the pelvic fixator placed on the patient. (C) Ultrasound-guided infiltration of the right femoral cutaneous nerve; SM: Sartorius muscle, LFCN: Lateral femoral cutaneous nerve.