

# SINGLE SHOT QUADRATUS LUMBORUM BLOCK FOR POSTOPERATIVE ANALGESIA AFTER HIP ARTHROPLASTY: A CASE REPORT

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## Introduction

Several ultrasound guided abdominal wall blocks are being administered to adults for a wide range of surgical procedures. Several version of quadratus lumborum (QL) block have been described and current literature includes at least three different approaches. Basically, the various techniques are described as either anterior, posterior or lateral approaches to the quadratus lumborum muscle in wich play a great role the thoracolumbar fascia (TLF) in influence the pattern of injectate spread and thus clinical effect. Many authors see the QL block as a natural continuation of the original trasversus abdominal plane block (TAP) approach at the triangle of Petit. However QL block and TAP block are essentially different categories of nerve blocks.

## Methods

In our hospital - Presidio Sanitario Cottolengo Torino - an 78 years old woman with bilateral coxartrosis was scheduled for elective total left hip replacement with postero-lateral surgical approach.

Based on our experience with QL block expecially in abdominal surgery, we opted for this type of block for primary postoperative analgesia in addition to selective spinal anesthesia for the operative anesthetic. Written informed consent was obtained.

A QL type I block was performed at the end of the surgical procedures in lateral decubitus under ultrasound guidance with a high frequency linear transducer (SONOSITE SII with 6 – 13 Mhz linear probe) deep to the transversus abdominal aponeurosis with an 110 mm 22 G block needle (SONOTAP PAJUNK). The in plane approach has been used. After identifying the interfascial plane, 5 ml of saline solution was injected to open the fascia and then 40 ml of ropivacaine 0,5% + 8 mg of dexamethasone for antalgic blockage.

## Conclusion

The QL block cannot generate anesthesia without additional procedures. We think the QL block can be used as the main component of multimodal postoperative analgesia or as an add-on block to reduce the requirement of general anesthetic intraoperatively, if it be used before surgery.

There were no studies reporting complications after the QL block.

In summary we report a case of excellent and prolonged analgesia after a single shot QL block in a patients undergoing invasive hip replacement. Although this block is effective, reliable and easy to learn and perform, further studies should be needed to clarify the role of QL block in surgical procedures involving the hip.

## References

- Parras T,Blanco R., Randomised trial comparing the TAP block posterior approach or quadrates lumborum block type I with femoral block for postoperative analgesia in femoral neck fracture, both ultrasound-guided. *Rev Especialy Anestesiol Reanim.*2016;63(3):141
- H.Ueshima,H.Otake,JA Lin *Ultrasound-Guided Quadrates Lumborum Block:An Updated Review of Anatomy and Techniques.*Biomed Research International 2017

## Results

An extended postoperative analgesia were obtained in the first 24 -30 hours after surgery either at rest and in movement. The patients did not request opiates; only 3000 mg of acetaminophene and 40 mg parecoxib were administered. The patient did not suffer postoperative side effercts like pain, nausea and vomiting.

We would like to emphasize not only the prolonged post operative analgesia, the good comfort for the patient but also the complete absence of motor weakness despite the use of ropivacaine 0,5% as opposed to lumbar plexus block, often considered a gold standard for total hip arthroplasty, where even analgesic concentration of local anesthetics can cause weakness.

