

Transmuscular Quadratus Lumborum Block Does Not Provide Any Benefit for Primary Hip Arthroscopy

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INTRODUCTION: For outpatient procedures, such as hip arthroscopy, proper perioperative analgesia is critical to limiting opioid consumption (and its related side effects), improving immediate postoperative function, and maintaining strong patient satisfaction metrics. The purpose of this study was to evaluate the efficacy of transmuscular quadratus Lumborum blocks (TQLB) in patients undergoing primary hip arthroscopy surgery.

METHODS:

One-hundred-two adult patients were prospectively randomized to receive either 30 mL of 0.5% bupivacaine in a transmuscular quadratus lumborum block (TQLB) (n=51) with pericapsular injection vs. pericapsular injection alone (Control). All study participants received a pericapsular injection with 20 mL of 0.25% bupivacaine given by the surgeon (10 mL through anterolateral hip portal plus 10 mL through midanterior portal sites). All analyzed patients received general anesthesia with a laryngeal mask airway.

Primary study outcomes included postoperative pain scores via the Numerical rating scale (NRS), which utilizes a 0-10 scale. Secondary outcome measures included opioid utilization (expressed as MME) during the postanesthesia care unit (PACU) period, total PACU recovery time, quadriceps strength [as judged by ability to straight leg raise (SLR)], as well as adverse events (nausea/vomiting).

RESULTS:

There was no significant difference between groups in terms of demographic information, including age, BMI, or preoperative pain assessment.

Initial PACU pain scores were not significantly different (control group 3.70 ± 3.36 vs. QL block group 4.03 ± 3.18). PACU opioid consumption was also similar between groups (TQLB: 28.51 ± 12.60 vs. CONTROL: 29.70 ± 9.47 MME; $p=0.39$). There was similarly no difference in total time spent in the PACU (TQLB 127 ± 35 vs. Control 122 ± 39 , $p=0.4$). There was also no difference in proportion of patients with quadriceps strength (TQLB 46% quadriceps weakness vs. 37% in control, $p=0.43$). There was no significant difference in percentage of patients that experienced nausea or vomiting (TQLB 48% vs. control 51%, $p=0.97$).

DISCUSSION AND CONCLUSION:

Based on a prospective, randomized controlled trial, patients undergoing hip arthroscopy for FAI that received TQLB in addition to a pericapsular lidocaine injection did not have any difference in postoperative pain scores, opioid use, PACU time, or quadriceps weakness compared to patients that received a pericapsular injection alone. Surgeons and anesthesiologists should consider alternative methods of perioperative anesthesia.