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QUADRATUS LUMBORUM TYPE 3 BLOCK VS PARAVERTEBRAL NERVE BLOCK EVALUATION IN ANTERIOR APPROACH TOTAL HIP ARTHROPLASTY

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Background: This is a prospective single blinded evaluative study comparing the opioid consumption and motor weakness for patients undergoing total hip arthroplasty (THA) with either a Quadratus Lumborum Type 3 Nerve Block (QLB) or a Paravertebral Nerve Block (PVB).

Methods: A consecutive cohort of patients undergoing elective direct anterior approach (DAA) THA by a single high volume surgeon were randomly assigned an anesthesiologist by the charge anesthesiologist. One anesthesiologist performed all QLBs and the other six anesthesiologists performed the PVBs. Pertinent data to include quality surveys from blinded patients, floor nurses, and physical therapists were prospectively collected and recovered from the electronic medical record.

Results: Overall, 160 patients were included in the study divided equally between the QLB and PVB groups. The QLB group had a statistically higher perioperative narcotic use, greater intra-operative peak systolic blood pressure and respiratory rate, and higher incidence of post-operative lower extremity muscle weakness. There were no statistical group differences for floor narcotic use, post-operative hemoglobin levels or hospital length of stay.

Conclusion: The QLB required greater intraoperative narcotic use and resulted in greater postoperative weakness, however, provided nearly equal post-operative pain management and did not adversely affect rapid discharge success. Because of this the greater narcotic requirements and higher rates of postoperative weakness, the QLB appears to be a less favorable alternative for pain management in patients undergoing DAA THA, but is an acceptable option in cases where a PVB may be less likely to succeed.