

Pain Control After Total Hip Arthroplasty: A Randomized Trial Determining Efficacy of Fascia Iliaca Compartment Blocks in the Immediate Postoperative Period

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Introduction: The purpose of this randomized trial was to identify whether fascia iliaca compartment blockade (FICB) reduces postoperative pain and narcotic consumption and improves early functional outcomes in primary THA performed through the mini-posterior approach.

Methods: Patients were recruited from September 2017 to May 2019. Eligible patients received a primary THA using the posterior approach with epidural anesthesia. Postoperatively, patients were randomized to receive a FICB or a placebo block. Pain scores and narcotic consumption were recorded after surgery. Functional outcomes including distance walked during therapy, timed-up-and-go testing, and quadriceps strength were recorded. The patients completed PROMIS pain and physical function surveys at 4 weeks postoperatively.

Results: During the study period, 120 patients were recruited. There was no difference in the average pain scores at any time interval between the placebo and block groups during the first 24 hours ($p=0.21-0.99$). There was no difference between the pre-block and post-block pain scores in the block group (4.42 vs. 3.83, $p=0.97$). There was no difference in the cumulative morphine equivalents consumed between the two groups during any time interval postoperatively ($p=0.06-0.25$). Functional testing showed no difference between the two groups regarding distance walked during the first therapy session (65.6 vs. 76.8 ft, $p=0.33$) and timed-up-and-go testing (63.7 vs. 64.7 sec, $p=0.95$). There was an increased incidence of quadriceps weakness in the block group (22% vs. 0%, $p=0.004$) requiring the use of a knee immobilizer and alterations in therapy protocols.

Conclusions: This trial shows that FICB does not improve functional performance and does not decrease pain or narcotic usage after mini-posterior THA. However, it does increase the risk of quadriceps weakness, placing patients at an increased risk of falling and requiring changes in therapy protocols. Based on these results we do not recommend FICB after THA performed through the posterior approach.