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Preoperative Fascia Iliaca Compartment Blockade for Hip Arthroscopy: A Multicenter, Prospective, Randomized, Controlled, and Triple-Blinded Study

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Summary:
In this prospective, randomized controlled trial of preoperative fascia iliaca compartment blockade versus placebo for hip arthroscopy for femoroacetabular impingement, intervention resulted in decreased narcotics usage, improved pain scores, and earlier discharge.

Abstract:

Introduction

Pain control after hip arthroscopy can be difficult and there have been no randomized, placebo-controlled trials for preoperative fascia iliaca compartment blockade (FICB). We hypothesized that FICB would improve pain scores and reduce narcotic consumption.

Methods

Seventy-four patients aged 18-50 undergoing unilateral hip arthroscopy for femoroacetabular impingement were prospectively enrolled and randomized into control or FICB groups at 2 centers based on a priori power analysis. We enrolled ASA Class I/II and Tönnis grade 0/1 patients and excluded pregnant or chronic pain syndrome patients. All patients were assessed preoperatively using the modified Harris Hip Score (mHHS). The FICB group received a preoperative ultrasound-guided injection with 0.25% ropivacaine with 1:200,000 epinephrine (30mL) and the control group received normal saline. Patients were then evaluated by total intraoperative and post-anesthesia care unit (PACU) narcotics, pain and duration of stay. Patients maintained a 6 week log of narcotic usage and pain scores. All opioids were converted to oral morphine equivalent doses (MED). All patients were prescribed identical medications for pain control and heterotopic ossification prophylaxis. A paired, two-tailed Student's t-test with significance set at $P<0.05$ was used.

Results

Preoperative demographics were similar between groups (all $P>.05$). Operative times were similar between fascia iliaca compartment blockade (109.05±32.67) and control (117.03±38.25) groups ($P=.300$). The FICB group required

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fewer intraoperative (24.41±11.75 vs. 28.66±12.63, P=.127), PACU (38.28±20.36 vs. 54.13±22.07, P=.004) and postoperative narcotics (226.61±139.09 vs. 396.11±456.58, P=.038), had improved pain control (average PACU pain scores 5.47±1.42 vs. 6.11±1.45, P=.031; maximum postoperative day 1-3 pain scores 6.04±2.23 vs. 7.18±1.27, P=.024), were discharged from the PACU sooner (205.46±66.18 vs. 241.97±95.81 minutes, P=0.034), and discontinued narcotics earlier (7.27±3.17 vs. 9.85±8.80 days, P=.100).

Conclusion

Preoperative FICB resulted in decreased narcotics usage, improved pain scores, and earlier discharge for patients undergoing unilateral hip arthroscopy for femoroacetabular impingement.