

Femoral Nerve Block Versus Intraarticular Infiltration: A Comparison of Analgesic Effects and Quadriceps Strength in Patients Undergoing Arthroscopic Anterior Cruciate Ligament Reconstruction

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Abstract: Femoral nerve block versus intraarticular infiltration: a comparison of analgesic effects and quadriceps strength in patients undergoing arthroscopic anterior cruciate ligament reconstruction

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Background: Early rehabilitation is a quite concern for patients undergoing arthroscopic anterior cruciate ligament (ACL) reconstruction.

Objective: To compare analgesia and quadriceps strength after femoral nerve block (FNB) with intraarticular (IA) infiltration using bupivacaine

0.25% for ACL reconstruction with patella tendon graft. **Material and Method:** Forty patients were prospectively randomized into 2 groups. Group FNB received spinal anesthesia plus a FNB under ultrasound guidance with 20 mL of bupivacaine 0.25%. FNB was performed at the end of surgery. Group IA received spinal anesthesia plus an intraarticularinfiltration with 5 mL of bupivacaine infiltrated along the patella tendon incision site and 15 mL into the knee joint. Both groups received intravenous ketorolac at wound closure. Data regarding demographic, time to first pain, time to first morphine requirement, morphine usage, pain scores, quadriceps strengthand complications were recorded. **Results:** Both groups had similar

median time to first pain (7 hours for group FNB versus 6 hours for group IA, $p = 0.20$) and first morphine requirement (10 hours, $p = 0.68$). Ninety percent of the patients in group IA and 55% of the patients in group FNB had good ability to extend knee at 24 hours after surgery ($p = 0.01$). No significant differences between groups for demographic data, postoperative pain scores andmorphine consumption. There were no complications associated with FNB or IA infiltration. **Conclusions:** Concerning quadriceps weakness, intraarticular bupivacaine infiltration has an effect on quadriceps strength less than FNB while provide comparable postoperative analgesia after patellar tendon graft ACL reconstruction.

References

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