Is liposomal bupivacaine useful in pain after anterior cruciate ligament reconstruction?

NEWS

Pain Management

The multimodal pain control regimens comprise of local anesthetics commonly administered into surgical sites. Liposomal bupivacaine is a novel formulation of bupivacaine intended for slow diffusion of a single dose of local anesthetic over a 72-hour period. No studies have compared pain management regimens comprising liposomal bupivacaine to traditional regimens in patients undergoing anterior cruciate ligament (ACL) reconstruction. A trial was performed to analyze liposomal bupivacaine in comparison with 0.25% bupivacaine hydrochloride (HCl) for pain control after ACL reconstruction.

Total 32 adult patients undergoing primary ACL reconstruction with some soft tissue quadriceps tendon autograft between July 2014 and March 2015 were registered. Before surgery, these patients received a femoral nerve block. During surgery, patients either received a 40-mL suspension of 20 mL Exparel and 20 mL 0.9% injectable saline or 20 mL 0.5% bupivacaine HCl and 20 mL 0.9% injectable saline, which was administered into the graft harvest site and portal areas. After ACL reconstruction, patients were given either a postoperative smartphone application or paper-based journal to record data for 1 week.

Out of 32 patients, 29 patients were analyzed (90.6%). Due to postoperative hematoma, 1 patient was excluded and two were lost to follow-up. Between two study groups, no statistically significant differences in postoperative pain, medication use, pain location, recovery room time, or mobility. was observed. Comparable outcomes were obtained with 0.25% bupivacaine HCl at a 200-fold lower cost than liposomal bupivacaine. Although, this study does not brace the widespread use of liposomal bupivacaine for pain control after ACL reconstruction in the setting of a femoral nerve block.

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