Background and Aims Anterior cruciate ligament (ACL) reconstruction is one of the most frequent arthroscopic procedures done in orthopaedic surgery and also one of the most painful. Although arthroscopy is associated with less tissue trauma, pain during the first 24-postoperative hours is still a clinical concern. The use of central analgesics in continuous parenteral infusion were associated with nausea, vomiting and longer hospital stay. Peripheral nerve blockade became a superior method in orthopaedic surgery. Concerning the fast mobilization as a mainstay in this kind of surgery, an “optimal” block would be predominantly sensory. The aim of this study is to investigate the success rate of preoperative ultrasound-guided peripheral nerve blockade using low dose of local anesthetic.

Methods 150 patients scheduled for the ACL reconstruction will be included in this study. They will be uniformly anesthetized and randomized between three groups: intravenous and two models of regional analgesia. Adductor canal block is combined with sciatic or i-pack block. Postoperative pain control, adjuvant use of intravenous analgesics, motor weakness of the quadriceps muscle, postoperative nausea, foot flexion and patient satisfaction were measured.

Results Statistical analysis was performed with variance analysis, T-test and $\chi^2$-distribution. Adductor canal block in combination with sciatic nerve block reduces quadriceps motor weakness with sufficient postoperative analgesia, but foot flexion is slower. Combination with i-pack block is motorless and analgesically equally effective.

Conclusions We found this technique and dosage optimal for this and similar procedures, but more clinical trials are needed.

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