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“Postoperative pain and medication use after an all-inside versus complete tibial tunnel ACL reconstruction: an expertise-based prospective clinical study”

The anterior cruciate ligament (ACL) is a key stabilizer in the knee, and when it tears, surgery is often needed to restore function. ACL reconstruction (ACLR) replaces the torn ligament with a graft by creating bone tunnels in the thigh and shin bones. Surgeons do this using one of two main techniques: the traditional method or the all-inside technique.

The difference between these techniques lies in bone tunnel preparation and graft insertion. The traditional method drills complete bone tunnels, which, while effective, removes more bone and may increase complication risks. The all-inside technique creates partial bone tunnels (sockets), preserving bone and reducing tissue damage. This approach may lead to less pain, quicker recovery, and fewer complications but requires specialized tools, a learning curve, and may cause graft elongation.

Our study compares these two methods using a quadriceps tendon graft, a graft type not previously studied in this context. While both techniques show similar long-term results for knee stability and function, data on postoperative pain and medication use are limited. Postoperative pain affects recovery time, return to activity, and quality of life. Amid the opioid crisis, understanding how surgical techniques influence medication needs is crucial.

We will track pain levels, medication use, complications, and patient-reported outcomes over six months following surgery to see if there are any differences between the two techniques. This research will help surgeons make better-informed decisions and improve recovery outcomes for patients undergoing ACLR with a quadriceps tendon graft.