

Clinical and arthrometric outcomes of an anatomic outside-in single-bundle anterior cruciate ligament reconstruction using a retrodrill.

David Figueroa, Rafael Calvo, Francisco Figueroa, Daniel Paccot, Guillermo Izquierdo, Nelson Morales.

Abstract

BACKGROUND: The main option to perform an anatomic anterior cruciate ligament (ACL) reconstruction is the anteromedial portal (AMP) technique. It has several reported complications (iatrogenic chondral injury, posterior-wall blowout, short sockets, increased risk of injury to common peroneal nerve). In an attempt to avoid these complications the outside-in (OI) technique was revived with the addition of a retrodrill. The aim of this study is to evaluate the clinical and arthrometric outcomes of a series of anatomical OI single bundle ACL reconstruction using a retrodrill.

METHODS: Prospective case series. KT-1000 and Pivot Shift Test were done at 24 months follow-up. International Knee Documentation Committee (IKDC), Lysholm and Tegner activity scores preoperatively and at final follow-up. Complications were reported. Statistical analysis was done with t-test.

RESULTS: 275 knees of 200 (73%) males and 75 (27%) females were enrolled in the study. Mean age 29.1 years (15-54). Mean follow-up 34.5 months (24-49). Mean preoperatively Lysholm Score 62 (25-95) versus 95 (76-100) at final follow-up ($p < 0.001$) Mean preoperatively IKDC score 60 (26.4-90.8) versus 92 (59.8-100) at final follow-up ($p < 0.001$) Mean Tegner activity Score pre injury 5 versus 5 at final follow-up. ($p = 0.59$) Mean KT-1000 side-to-side difference 2mm (1-6). Pivot Shift test negative in 243 patients (90%); positive in 32 (10%) patients. 13 (5%) ACL re-ruptures. 2 (0.7%) infections. No other complications were reported.

CONCLUSION: OI single bundle anatomic ACL reconstruction using a retrodrill is a valid and safe option that avoids the complications reported with the AMP technique.