

Anterior Cruciate Ligament Reconstruction Using an Achilles Tendon Allograft Graft: A Retrospective Comparison of Tunnel Widening Upon Use of two Different Femoral Fixation Methods

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Objectives: To compare femoral and tibial tunnel widening (TW) in patients undergoing anterior cruciate ligament (ACL) reconstruction using an interference screw (IS), or an EndoButton-Continuous Loop (EndoButton-CL®) on the femoral side, and an IS/staple on the tibial side.

Methods: We retrospectively reviewed data on 46 patients who underwent arthroscopic ACL reconstruction with Achilles tendon allografting. Fixation was performed with a bioabsorbable IS (the IS group) in 24 patients (mean age 26.5 years), and with the EndoButton-CL device (the EB group) in 22 patients (mean age 28.1 years) on the femoral side. Evaluation included standardized anteroposterior (AP) and lateral radiography. The diameters of tunnels at the last follow-up visit (at a median time of 17 months postoperatively) were compared to those noted on radiographs taken 1 day postoperatively.

Results: The two groups were similar in terms of age and gender distribution, the operated side, the size of the tunnel created, and the follow-up period ($p>0.05$). Femoral TW at the proximal and middle levels (on both anteroposterior and lateral views) in the IS group was significantly greater than in the EB group ($p<0.050$ for all comparisons). No significant difference in femoral TW at the distal level was evident between the groups, and tibial TW at all levels was similar in both groups ($p>0.050$).

Conclusion: Femoral ACL graft fixation using an EndoButton-CL reduced femoral TW compared to use of an IS.

The Orthopaedic Journal of Sports Medicine, 2(11)(suppl 3)

DOI: 10.1177/2325967114S00134

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