

Paper #4

A Prospective Study of Bone-Tendon-Bone ACL Reconstruction with and without Lateral Extra-Articular Tenodesis: 19-Year Clinical and Radiological Follow-Up

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Summary:

At 19 years follow-up after patellar tendon ACL plasty, lateral tenodesis did not significantly improve graft survival in our study. Lateral femorotibial osteoarthritis was significantly increased in patients with a lateral tenodesis.

Abstract:

Introduction. Anterior cruciate ligament (ACL) arthroscopic reconstruction with a patellar tendon graft (BTB) is a well-known and reliable surgical option for control of anterior laxity, at short and middle term. Most of those patients are young and practice sports, often at high level. Few studies have evaluated the long term effects of ACL reconstruction especially in association with lateral tenodesis. It has been shown that chronic anterior instability evolves towards femorotibial osteoarthritis within 10 to 20 years after ACL rupture. This study aims to compare long-term survival and femorotibial arthritis between ACL reconstructions with and without lateral tenodesis.

Material and Methods. 121 consecutive knees (120 patients) with an ACL rupture between 1998 and 1999 were included in this prospective randomized monocentric study. For the 61 knees in group BTB, an isolated patellar tendon plasty with out-in technique was performed. For 60 knees in group BTB-T, the intra-articular plasty was associated with a lateral tenodesis with gracilis tendon. Patients were reviewed at 1 year, 6 years and 19 years post-operatively.

Results. We were able to contact 79 patients (66%) at a minimum follow-up of 19 years. Of these 79 patients, 43 had a clinical examination, 45 had standard X-rays, 42 had a radiological laximetry (TELOS). 36 patients were evaluated through a telephone questionnaire. 41 patients (34%) were lost to follow-up. 16 knees (20%) had experienced a graft failure. The difference between group BTB (28.6%) and group BTB-T (10.8%) concerning graft failure was not statistically significant. 32 patients (71%) had femorotibial osteoarthritis (IKDC grade C or D). There was no difference between group BTB and BTB-T concerning medial femorotibial osteoarthritis. Lateral femorotibial osteoarthritis was significantly increased in groupe BTB-T (59%) compared to group BTB (21%) and to the contralateral knee (5%). 45% of patients had had a lateral or medial meniscectomy. Mean subjective IKDC score was 81.7/100, comparable between groups BTB and BTB-T. 67% still practiced pivot sports.

Conclusion. At 19 years follow-up after patellar tendon ACL plasty, lateral tenodesis did not significantly improve graft survival in our study. Lateral femorotibial osteoarthritis was significantly increased in patients with a lateral tenodesis. However, a follow-up bias may be that lesions of the lateral meniscus were more common in BTB-T patients for whom we obtained X-rays. Medial osteoarthritis was not affected by lateral tenodesis.