

ANTERIOR CRUCIATE LIGAMENT SINGLE BUNDLE RECONSTRUCTION WITH FOUR STRANDS OF THE SEMITENDINOSUS USING THE TLS TECHNIQUE.

CLINICAL RESULTS OF A SERIES OF 74 KNEES WITH A MINIMUM OF 18 MONTHS FOLLOW-UP

H. Robert^a, R. Limozin^b, T. de Polignac^c

a. Service d'orthopédie-traumatologie, centre hospitalier Nord Mayenne, 229, boulevard Paul-Lintier, 53100 Mayenne, France

b. Cabinet médical, 4 boulevard d'Estournel, 12000 Rodez, France

c. Clinique, service de chirurgie orthopédique, 4, chemin de la Tour-la-Reine, 74000 Annecy, France

The type of graft and the method of fixation in anterior cruciate ligament (ACL) ligamentoplasty remain a subject for debate. The use of hamstring tendons reduces the morbidity of harvesting the graft relative to the patellar tendon but raises the question of the immediate stability of the graft, depending on the method of fixation. We present the results of our experience with the Tape Locking Screw (TLS) technique which provides good post-operative fixation of the graft. The hypothesis to be demonstrated was that the TLS technique provides results, in the short term, as good as those of the classic techniques with the patellar tendon or hamstring tendons. This was a multicentre, continuous, prospective series of 82 patients operated on for a unilateral rupture of the ACL. Fifty-eight sportsmen and 24 sportswomen with a mean age of 29 years underwent surgery performed by three surgeons in 2007.

The TLS technique is based on five fundamental principles: harvesting only the semitendinosus tendon, preparation of a short four-stranded loop, strong pre-stressing of the loop, reaming of short femoral and tibial seating, screw fixation of each end via an intermediate polyethylene terephthalate strip. Postoperatively, the knee has free flexion without splinting, weight-bearing is possible from the start. Seventy-four patients were followed up after a mean of 24 months (18 to 36 months). The International Knee Documentation Committee (IKDC) subjective score rose from 68 to 92 points, the Lysholm score from 74 to 94 points, while 14% of the patients continued to experience moderate knee pain. The IKDC final objective was: A: 31%, B: 43%, C: 23%, D: 3%. There were no general or infectious complications. Two patients had algodystrophy with functional sequelae, and one patient had arthrofibrosis. The results are as good as those of the meta-analyses by Biau et al. in 2007 or Lewis et al. in 2008.

The advantages of the TLS technique are: harvesting of only the semitendinosus, solid primary fixation and simple immediate subsequent steps. This short-term study should be confirmed by a review at five years and other clinical studies.

Level of evidence.—IV (French grading)

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Corresponding author.

E-mail address: henri.robert@wanadoo.fr (H. Robert).

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