

21. ACL replacement using the gracilis and semi-tendinosus tendons (DIDT), with a systematic lateral reinforcement.

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GOAL. Describe and report the first results with a surgical technique, allowing an intra-articular ACL replacement and a lateral reinforcement, with the same graft.

MATERIAL and METHODS. The procedure consists of a trans-arthroscopic replacement of the ACL, by the DIDT, most often reinforced by a synthetic ligament. In addition a lateral "Lemaire" procedure is performed systematically with the help of the semi-tendinosus tendon. This is actually long enough to pass through a transverse tunnel, in the lateral femoral condyle, passing under the lateral collateral ligament, to end up at Gerdy's tubercle. The tendon is fixed by a bioresorbable interference screw.

From January 1994 to December 1998, 510 operations were performed but only 262 cases chosen for the study. Of the 262 patients, 202 were reviewed (77%). In the material we found 36 acute ACL ruptures, 148 chronic instabilities and 18 re-operations. Among those, 143 had had a reinforcement with an artificial ligament. In the group we found 101 patients in sport at a competitive level before surgery, 92 at leisure level and 9 medium active. The mean age was 30 years (range 19-56), and there were 134 men and 68 women.

RESULTS AND DISCUSSION. The complications were rare: Six thromboses, no infection, one inflammatory synovitis and a stiffness, which needed mobilisation under general anaesthesia in 4 patients.

This low complication rate is one of the advantages with this technique, being explained by the non aggressive nature of the graft harvesting and the technical facility due to this tendon technique adapted to arthroscopic surgery.

The results were evaluated by 4 criteria :

- Subjective result : 91% of the patients were very satisfied or satisfied.
- Functional results (ARPEGE score) : We found 27% excellent, 56% good, 10% fair and 7% poor results. Among the patients active in sports, 60% in the competitive group and 86% in the leisure sport group went back to the original sports level.
- Criteria at clinical examination : Lachman test, Dejour test. The postoperative negative Dejour test showed to be as important as the negative Lachman test. In the patients with excellent and good results, the Dejour test was negative, while the Lachman test could still be positive.

- Isokinetic criteria : One hundred and ten patients were tested in a BIODEX machine at the time of return to competitive sports. The tests were performed 8 months post-operatively, and at 3 normal speeds (90, 180 and 210 °/second), showing the tendon harvesting not to have any negative consequences, as the mean maximal-work deficit was only 10-15%, with a satisfying ratio hamstrings/quadriceps.

CONCLUSION. This Kenneth-Bus technique which we use since 5 years, have given satisfying results and confirm the importance of the lateral reinforcement in knees with an anterior instability. It has given better results, compared to the Kenneth-Cho technique, which we used earlier, only replacing the ACL intra-articularly by the two tendons. A comparison between the two techniques will be made later.

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