

Twenty Year outcome of a longitudinal prospective evaluation of isolated endoscopic ACL reconstruction with patella tendon autograft

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INTRODUCTION

Long term prospective follow up studies of single-incision endoscopic ACL reconstruction are limited and may include confounding factors. This longitudinal prospective study reports the outcome of isolated anterior cruciate ligament (ACL) reconstruction using middle-third patellar tendon autograft in 90 patients over 20 years.

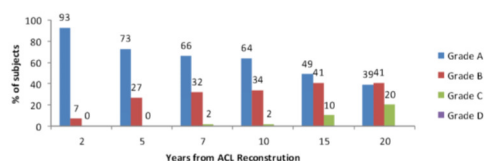
METHODS:

Between January 1993 and April 1994, 90 patients met study inclusion criteria, evaluation 1,2,3,4,5,7,10,15 and 20 years post surgery. Exclusion criteria: associated ligamentous injury requiring surgery, previous meniscectomy; meniscal injury meniscectomy more than 1/3; chondral injury; and an abnormal contralateral knee.

RESULTS:

At 20 years, 32(36%) patients had sustained another ACL injury, 8 (9%) to the index limb and 27(29%) to the contralateral limb (3 injuring both knees). Mean IKDC score was 86, 50% participated in strenuous/

Figure 3: Overall IKDC Radiological Grading

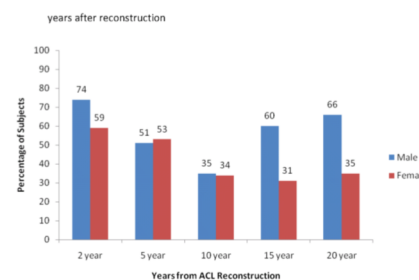


very strenuous activities, kneeling pain was present in 63%. Radiographic degenerative change was found in 61%, 20% IKDC Grade C, 0% Grade D. IKDC clinical examination revealed 95% had a normal/nearly normal knee. Significant gender differences existed: females were less likely to re-injure the reconstructed ACL (18%v2%, $p=0.01$), reported poorer IKDC subjective score (90v83, $p=0.03$), had more activity related pain (57%v20%, $p=0.02$),

RESULTS (CONT)

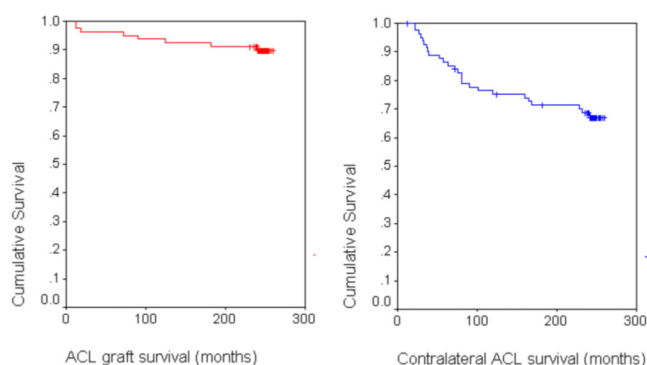
and less likely to participate in strenuous activity (35v66, $p=0.01$).

Figure 4: Percentage of males and females participating in strenuous sports at 2-20 years after reconstruction



ACL graft survival was not related to age. Patients <18years old had an increased odd ratio (3.2) for rupturing the contralateral ACL. Coronal graft

Figure 6: Kaplan Meier ACL graft (left) And Contralateral ACL (right) survival over 20 years



angles <17 degrees had increased risk of failure compared to those over 17 degrees (96% v 77%), by a factor of 8.5.

CONCLUSION

Injury commonly occurred in the contralateral ACL than the reconstructed ACL graft, the most significant predictor of contralateral ACL injury is age under 18yrs. The most significant predictor of ACL graft rupture is a coronal graft angle of less than 27 17 degrees. Females had lower rerupture rates, poorer subjective scores, decreased participation in strenuous activity, putting the graft at less risk of failure. Kneeling pain remained persistent over 20 years. Radiographic osteoarthritis was evident in 61% of subjects but symptomatic osteoarthritic symptoms were rarely reported.