

**Long term
outcome of
endoscopic ACL
reconstruction
with patellar
tendon autograft.
Minimum 13 year
review**

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INTRODUCTION

While the short term results of ACL reconstruction are now well reported, to date there are no studies evaluating endoscopic reconstruction of the ACL with a minimum of 10 years of follow-up.

METHODOLOGY

Between March and November 1989 the senior author performed ACL reconstructions in 97 consecutive patients. Patients with grade C or D articular surface damage (10 patients), concurrent MCL repair at the time of reconstruction (15 patients) were excluded. A further 5 patients were excluded who had suffered a previous contralateral ACL rupture, leaving 67 patients in the study group.

Patients were assessed at 5, 7 and 13 years postoperatively by independent researchers. The following assessment was performed:

- IKDC Knee Ligament Evaluation Form
- Lysholm Knee Score
- Instrumented Testing using the KT1000 arthrometer
- Kneeling pain
- Radiographs at 5, 7 and 13 years postoperatively

RESULTS

A total of 23 patients (34%) had an ACL injury subsequent to the reconstruction. 12 % had an ACL graft rupture and 22% had a contralateral ACL rupture.

Patients who had undergone meniscectomy at the time of reconstruction had increasing laxity between 7 and 13 years on instrumented testing (p=0.03) and Lachman test (p=0.05), and a trend towards higher incidence of ACL graft rupture (p=0.08).



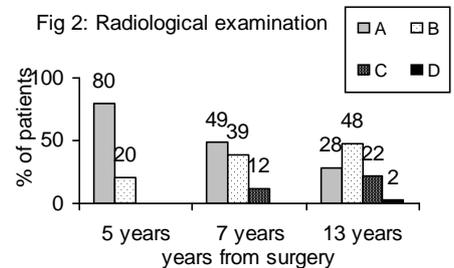
The percentage of patients with extension loss increased between both 5 and 7 years (p=0.06) and 7 and 13 years (p=0.02).

RESULTS

| | Years from surgery | | |
|--|--------------------|----|-----|
| | 5 | 7 | 13 |
| No of patients | 48 | 42 | 49 |
| Subjective Assessment % norm or nearly norm | 96 | 95 | 96 |
| Overall IKDC % norm or nearly norm | 89 | 79 | 74* |
| Lachman Grade 0 (%) | 56 | 60 | 63 |
| Extension deficit ≤3° (%) | 98 | 88 | 56* |
| Functional Hop Test 90% of opposite limb | | 93 | 66* |
| KT 1000 – manual max <3mm (%) | | 67 | 60 |
| Radiograph grade A (%) | 80 | 49 | 28* |

* denotes significant difference

Degenerative changes on radiographs were found in 76% of patients at 13 years and were associated with loss of extension (p=0.03), older age (p=0.007), and meniscectomy (p=0.05).



CONCLUSION

Endoscopic ACL reconstruction with patellar tendon autograft affords and maintains good self reported assessments and clinical ligament evaluation up to 13 years. However radiographic degenerative changes were seen in two thirds of patients and almost half had developed loss of extension, suggesting the onset of early osteoarthritis. Patients who had undergone meniscectomy at the time of reconstruction had increased clinical ligament laxity over time and a trend towards higher rate of graft rupture, possibly reflecting the effect of prolonged increased strain on the ACL graft. Continued follow up is required to resolve concerns regarding the long term integrity of the patellar tendon graft beyond 10 years, particularly in the absence of meniscal tissue.