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Fifteen Year Follow-Up of a Randomised Comparison of Patellar Tendon and Hamstring Tendon Anterior Cruciate Ligament Reconstruction

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Summary:
This randomised control trial shows that hamstrings tendon and patellar tendon ACL reconstructions have comparable results at an average of 15 years follow-up.

Abstract:
Study Design:
Prospective Randomised Controlled Trial.

Introduction:
Numerous studies have compared patellar tendon (PT) and hamstring tendon (HS) ACL reconstructions in the short to mid term. This study provides long term follow-up data of a group of patients who had previously participated in a randomised controlled trial.

Methods:
Of the original cohort of 65 patients, 21/31 PT and 24/34 HS subjects were able to be reviewed in person at a mean of 15.2 years (range 14-16). They completed the IKDC Subjective Knee Score, Cincinnati Knee Rating and Sports Activity Scales, as well as reporting the incidence and severity of anterior knee pain and kneeling pain using visual analogue scales. Examination consisted of assessment of any effusion, range of motion, anterior knee laxity measured by KT-1000, Lachman test, and the pivot shift test. Weight-bearing PA in flexion and lateral X-rays assessed for osteoarthrosis using the Kellgren-Lawrence classification.

Results:
The mean age of the group was 42 years (31-57). There were 36 males and 9 females. There was no statistically significant difference between the groups for any of the variables measured. There was trend towards a higher incidence of kneeling pain in the PT patients, although the severity of reported kneeling pain was similar in both groups. The previously observed increased extension deficit in the PT group at three years had resolved and the mildly increased anterior knee laxity in the HS group had reduced. There was no difference in the degree of osteoarthrosis between the groups (HS: 17% > KG I, PT: 19% > KG I), but older patients had more advanced changes irrespective of graft type.

Conclusions:
This RCT shows that HS and PT ACL reconstructions have comparable and results at an average of 15 years follow-up. The degree of osteoarthrosis present in the knee is dependent on age of the patient as opposed to graft type.