

rotation (23.9 ± 15 Nm). Forward and medial hop tests failed to identify significant differences between extremities. Lateral hopping revealed a 4.9 ± 13 cm involved side decrease. IKDC Subjective Knee Evaluation scores were 86.4 ± 11 . Current Health Assessment physical function subscale scores were 94.2 ± 6 . Sensation scores were 7.6 ± 2.3 (range = 2-10). Multiple regression revealed that involved side prone isokinetic hamstring work at 60° sec and patient activity level predicted 68% of lateral hop performance ($R^2 = 0.68$). Involved side sensation score and prone isokinetic hamstring work at 60° sec predicted 61% of medial hop performance ($R^2 = 0.61$) and isometric hamstring torque at 90° knee flexion predicted 42% of forward hop performance ($R^2 = 0.42$). Prone isokinetic hamstring work at 60° sec, isometric hamstring torque at 90° flexion, and sensory score were related to patient function at 2 years following ACL reconstruction using a hamstring autograft.

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High School and College Female Athletes: Intermediate-Term Comparison of Bone-Patellar Tendon-Bone Versus Hamstring Anterior Cruciate Ligament Reconstruction (SS-12)

Female athletes are at greater risk for anterior cruciate ligament (ACL) injury than males. Recently, hamstrings (HT) have been a more popular graft choice for this gender and age population. This is in part due to improved cosmesis and potentially less harvest site morbidity. We hypothesize there is no difference in outcome between hamstring versus bone patellar tendon bone (BPTB) ACL reconstruction. Methods: A case-control study of athletic related ACL reconstructions in female high school and college athletes was performed. Participants underwent either HT or BPTB ACL reconstruction and were matched on age at injury, pre-injury activity level, time from injury to surgery (chronicity), and number of giving way episodes prior to surgery. Participating patients completed the IKDC Subjective Knee Form; the Activities of Daily Living (ADLs) and Sports Activity Scale (SAS) of the Knee Outcome Survey; and the SF-36 general health status questionnaire. Patients were seen in follow-up for X-ray evaluation, physical examination, KT-1000 testing, quadriceps torque using Biodex testing, and assessment of functional strength using one-legged hop and vertical jump tests. Paired *t* tests and Bowker's test for correlated proportions were used to compare the HT versus BPTB. Results: Twenty-four matched pairs were included. Average length of

follow-up was 5.5 for BPTB and 3.9 years for HT. The side-to-side difference in passive extension was significantly greater in the BPTB (3°) compared to the HT (0°) group. There was a trend for an increased maximal manual KT-1000 in the BPTB group (2.4 vs. 1.2 mm, $P = .08$). The BPTB group had significantly greater avoidance of kneeling and numbness/dysesthesia. There were no significant differences on IKDC, ADLS, or SAS. However, there was a trend for the BPTB group to have higher SF-36 physical component summary scores (56.8 vs. 54.6, $P = .06$). Conclusions: HT grafts for ACL reconstruction in the high school female athlete appear to be at least as effective as BPTB graft reconstructions. This study reinforces that HT is an acceptable alternative with less numbness/dysesthesia, kneeling pain, and loss of extension compared to BPTB.

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Anterior Cruciate Ligament Reconstruction With Quadriceps Tendon Allograft (SS-13)

As the frequency of anterior cruciate ligament (ACL) reconstruction increases, so does the demand for suitable allograft. The purpose of this study was to evaluate the results of ACL reconstruction using a quadriceps tendon allograft. ACL reconstruction with quadriceps tendon allograft has not been previously reported. Twenty-seven patients were evaluated that underwent ACL reconstruction using quadriceps tendon allograft. One surgeon performed all of the ACL reconstructions. The bone plug was placed on the femoral side. The femoral fixation consisted of bioabsorbable interference screw fixation. Bioabsorbable interference screw fixation was also used on the tibial side. Tibial-sided graft fixation was augmented with the use of screw and washer post fixation. An accelerated rehabilitation protocol was utilized for all patients. The average follow-up was 32 months (range 22-50 months). Results were measured with the International Knee Documentation Committee (IKDC) grade, Lysholm score, Tegner scale, single leg hop test and KT-1000. The average patient age was 34 years at the time of surgery. The mean preoperative Lysholm and Tegner scores were 44.4 and 2.9 respectively. These improved to a mean of 91.9 and 5.5 postoperatively. The IKDC grade was normal or nearly normal in all patients. The postoperative single leg hop score averaged 95.0% of the uninjured leg. The KT-1000 evaluations demonstrated a mean side-to-side difference of 1.1 mm (range