Anterior Cruciate Ligament Allograft Reconstruction in the Skeletally Immature Athlete


Abstract: The purpose of this study was to evaluate anterior cruciate ligament allograft reconstruction in skeletally immature athletes. Eight patients (mean age, 13 years, 6 months; range, 10 to 15 years) with radiographic documentation of open growth plates had anterior cruciate ligament repair and reconstruction with fascia lata or Achilles tendon allograft tissue. A 7-mm graft was centrally placed across the tibial physes and in an over-the-top position on the femur. All patients returned for followup a mean of 58 months (range, 22 to 94) postoperatively. All had an immediate knee motion and rehabilitation exercise program. The results were rated on a comprehensive rating system that assessed 20 variables. At followup, all patients showed closure of the growth plates. The difference in lower limb length, measured on scanograms, was not clinically significant. On KT-1000 arthrometer testing, 5 patients had less than 3 mm of increased anterior-posterior displacement (normal knee minus reconstructed knee) and 3 patients had between 3 and 5 mm. The final overall ratings were 6 excellent, 1 good, and 1 fair. The procedure is infrequently used, but appears to have merit in select, skeletally immature athletes who desire not to modify athletic activity or when associated meniscal repairs warrant consideration for reconstruction.