Reconstruction of Anterior Cruciate Ligament Using Cross Pin Femoral Fixation (Short-Term Results)

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Abstract

Background: We evaluated the short term results of reconstruction of anterior cruciate ligament ruptures using a four strand hamstring autograft and cross pin femoral fixation.

Methods: In a cross-sectional study 24 patients (1 female, 23 males) with mean age of 25 years (20-34) with chronic ACL ruptures were studied in a hospital in Urmia. The patients were treated with a four-strand hamstring autograft, cross pin femoral fixation (transfix) and an interference screw on the tibial side. Eight patients received simultaneous treatment for meniscal pathology. Final evaluation was performed 9 months after surgery, using the Lysholm and tegner scales, radiographs and a simple arthrometer.

Results: The Lysholm score was good or excellent in 22 patients, fair in one and poor in one patient. Mean Lysholm score was 85.9. Tegner activity scores demonstrated that 16 patients had moved at least one level up, and the remaining cases stayed at their pre-operative level. Arthrometer showed a significant decrease in anterior tibial translation. Two patients developed septic arthritis one of whom required graft, pin and screw removal. Because of graft harvest failure, hamstring graft was taken from the contra lateral side in 2 patients.

Conclusions: Reconstruction of ACL using four-strand hamstring tendons and cross pin femoral fixation results in considerably high success rate in short term. Infection and graft harvest failure are the major complications.

Keywords: Anterior cruciate ligament; Transplantation, autologous; Knee; Tendons