

One-Stage Posterior Cruciate Ligament Inlay Reconstruction Combining Anterior Cruciate Ligament Reconstruction Following Knee Dislocation

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摘要

Abstract

Knee dislocation is a rare but severe injury that involves damage to the anterior cruciate ligament (ACL), posterior cruciate ligament (PCL), lateral or medial ligamentous structures, and other soft tissues or bony structures surrounding the knee joint. No consensus exists regarding the best treatment method. This work presents a method of 1-stage ACL and PCL reconstruction in which a contralateral quadriceps tendon – bone autograft with tibial inlay technique is used for the PCL and contralateral hamstring tendon autograft with suspension fixation is used for the ACL. After harvesting grafts, the patient is put in the lateral decubitus position. Under arthroscopy, the femoral tunnel for the anterolateral bundle of the PCL is created using an 8-mm reamer via a prepositioned guide pin. Next, the tibial tunnel of the ACL is created with an appropriate diameter cannulated reamer. Directed by the femoral guide instrument with a 7-mm offset, a guide pin is positioned retrograde through the tibial tunnel. A reamer is then used to create a 35-mm long closed-ended femoral tunnel for the ACL. A posterior arthrotomy for the PCL inlay technique is performed. After capsulotomy, a unicortical window is created at the footprint of the PCL and the inlay graft is fixed using a 3.5mm-cancellous screw and washer. The PCL graft is then passed into the femoral tunnel. The ACL graft is passed in a retrograde fashion using the Beath pin. The ACL graft is fixed by tying with a washer on the femoral side and by tying with a screw on the tibial side. The PCL graft is then fixed on the femoral side.