

Anatomical Reconstruction of Posterolateral Corner of the Knee Using Split Achilles Tendon Allograft

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Introduction

In this study, we analyzed the clinical outcomes at a minimum of one year following new anatomical reconstruction of the posterolateral corner of knee using split Achilles allograft. Our method reasonably addresses the several pitfalls in the reconstruction of the posterolateral corner, including (1) concurrent reconstruction of important 3 posterolateral structures, (2) regaining the isometry of the lateral collateral ligament, (3) repositioning the reconstructed popliteus into its original position, and (4) providing a secure fixation method.

Material and Methods

Between Jan. 2002 and Mar. 2003, 11 male patients with posterolateral instability were treated with the new technique of posterolateral reconstruction. We assessed Tegner and Lysholm scores to determine preoperative and postoperative knee function. To evaluate stability, we assessed dial tests, varus stress tests and posterolateral drawer test.

Result

Ten out of 11 patients had negative posterolateral drawer test and varus stress tests at 0 and 30 degrees of knee flexion. Mean side to side difference of dial test at 30 degrees of knee flexion improved from 14 degrees to -2 degrees. The mean preoperative Lysholm score was 38.6 points and, at the time of latest follow-up, the mean score was 73.3 points ($p < 0.01$). The mean Tegner score improved from 1.8 to 3.4 points ($p < 0.05$). All patients except one obtained full range of knee motion at the time of latest follow-up. The patient, who had 10 degrees of flexion contracture at one year follow-up, was diagnosed as having reflex sympathetic dystrophy.

Conclusion

The current study suggests that the new anatomical reconstruction of posterolateral corner of knee is a reliable method providing excellent stability and satisfactory clinical results.

Key word: Posterolateral reconstruction, Knee, Achilles allograft