



Isolated single bundle ACL reconstruction preserving the remnant using a navigation system

Center for Joint Disease, Chonnam National University Hwasun Hospital, Jeonnam, Korea

Eun Kyoo Song · Jong Keun Seon · Sang Jin Park
Young Jin Kim · Chang Ich Hur · Yong Jin Cho

Purpose

In some of the ACL injuries showed only isolated single bundle rupture, isolated single bundle reconstruction and preservation of remnant intact bundle seemed to be reasonable to restore function of ACL. But topographic structures were not seen, so correct positions of the tibial and femoral tunnel are difficult.

Materials and Methods

From June 2007 to January 2008, 10 patients (8 men, 2 woman) were underwent ACL reconstruction for partial ruptures of ACL, either anteromedial bundle (5 patients) or posterolateral bundle (5 patients). In each case, isolated single bundle reconstruction and preservation of remnant intact bundle using navigation were performed and in vivo stability test were performed.

Results

The mean anterior displacement was 12.6 mm preoperatively and 4.3 mm postoperatively. The mean posterior displacement was 2.7 mm preoperatively and 2.0 mm postoperatively. The mean internal rotation was 15.5 degrees preoperatively and 13.1 degrees postoperatively. The mean external rotation was 18.5 degrees preoperatively and 13.3 degrees postoperatively. Isolated single bundle reconstruction preserving the remnant one improved stability of the knee.

Conclusion

Navigation can provide optimum position of the tunnel replacement in isolated single bundle reconstruction and preservation of remnant intact bundle.

Key Words: Anterior cruciate ligament, Isolated bundle rupture, Reconstruction, Navigation