

Posterior Cruciate Ligament Reconstruction -Transtibial tunnel versus Tibial inlay technique-

Eun Kyoo Song, M.D., Jong Keun Seon, M.D., Taek Rim Yoon, M.D., Hyoung Won Kim, M.D.

Department Center for Joint Disease, Chunnam National University Hawsun Hospital

Introduction

The goal of this study was to compare the clinical and radiological results of posterior cruciate ligament (PCL) reconstruction using the transtibial tunnel technique with those of the tibial inlay technique.

Material and Methods

We compared the clinical results of Lysholm knee score, posterior draw test at 90° and radiologic results of knee stability by using Telos® device in 49 knees after PCL reconstruction using transtibial tunnel technique (group A) and in 33 knees using tibial inlay technique (group B). The mean age at operation were 35 (range, 17~69) years in group A and 35 (range, 15~61) years in group B and the gender were 43 males, 5 females in group A and 30 males, 2 females in group B. The cases combining posterolateral (PL) rotatory injury were 18 (37%) in group A and 4 (12%) in group B. The mean follow-up period was 35.6 (range, 24~69) months in group A and 47.9 (range, 24~80) months in group B.

Result

The average Lysholm knee score was improved from 61.1 preoperatively to 90.9 points at follow-up in group A and 51.1 preoperatively to 93.3 at the last follow up in group B ($P > 0.05$).

Preoperatively, all knees in both groups showed grade III (more than 10 mm) laxity on posterior draw test. Postoperatively, 44 patients (90%) showed grade I laxity (0~5 mm) and 5 patient (10%) grade II (5~10 mm) laxity in the group A. And in the group B, 27 patients (82%) showed normal or grade I laxity and 6 patients (18%) showed group II laxity at the last follow-up. However, there was no significant differences between two groups.

On instrumented posterior laxity test with Telos® device, mean side-to-side difference on 20 lb was 12.9 (range, 8~23) mm preoperatively, and decreased to 4.8 (range, 0~10) mm at the last follow-up in group A, and 11.4 (range, 9~15) mm preoperatively to 6.0 (range, 3~9) mm at the last follow up in group B. There were no significant differences between two groups with regard to clinical and radiological results.

Conclusion

Both transtibial tunnel and tibial inlay technique showed relatively good clinical and radiological results. However, there were no significant statistical differences in the results between two groups. Therefore, we anticipate that either the transtibial tunnel or tibial inlay technique would be good procedure for the PCL reconstruction. But the more cases and longer follow-up study would be needed.

Key word: PCL Reconstruction, transtibial, inlay

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