

Paper #91

Return to Sports and Clinical Outcomes After Arthroscopic Anatomic Posterior Cruciate Ligament Reconstruction with Remnant Preservation Using a Posterior Trans-Septal Portal in High-Demand Patients

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Summary:

Return to Sports after Arthroscopic Anatomic Posterior Cruciate Ligament Reconstruction in High-Demand Patients

Abstract:

Purpose

Returning to sports activity at the same or higher levels should be considered a main objective for posterior cruciate ligament reconstruction (PCLR) when determining success rates for highly active patients. The purpose of this study was to evaluate the clinical and radiological outcomes of transtibial PCLR with remnant preservation using a posterior trans-septal portal in high-demand patients and to investigate the rate of return to sport, quality of sports activities, and patient satisfaction following PCLR.

Methods

Fifty-two patients who underwent isolated PCLR meeting were included. Subjective assessments included the Lysholm score, subjective International Knee Documentation Committee (IKDC) score, and Tegner activity scale. A questionnaire elicited information associated with RTS and satisfaction. Functional tests included isokinetic muscle strength, single leg hop for distance (SLHD) test, and single leg vertical jump (SLVJ) test.

Results

The subjective assessments and functional tests significantly improved postoperatively (all, $p < .001$). Mean time to return to full sports activity was 9.7 ± 5.1 months. Thirty-eight (73.1%) patients returned to previous sports activities 9 months after PCLR and 45 (86.5%) patients maintained their previous sports activity level after 24 months. A sports-experience questionnaire indicated 48% and 69.2% of the patients were participating with unlimited effort and performance, respectively, and no pain at 9 months and 24 months after PCLR. Multivariate analysis indicated extensor deficit (odds ratio (OR), 4.2 (95% CI, 1.342–17.839)), flexor deficit at 60°/sec (OR, 3.8 (95% CI, 1.081–14.476)), Limb Symmetry Index (%) for the SLVJ test (OR, 2.2 (95% CI, 1.212–9.227)), and satisfaction (OR, 2.8 (95% CI, 1.186–10.281)) were significantly associated with failure of not returning to pre-injury sports activity levels at the 9-month follow-up.

Conclusion

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Arthroscopic anatomic PCLR with remnant preservation using a posterior trans-septal portal showed high rates of RTS and high patient satisfaction, as well as satisfactory clinical and radiological results in highly active patients. This surgical technique could be an effective treatment for grade III PCL injury in high-demand patients who desire a more rapid RTS.