Arthroscopic Reconstruction of Chronic Isolated Posterior Cruciate Ligament Instability in a Professional Dancer: A Case Report

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Objectives: Chronic isolated injuries of the posterior cruciate ligament (PCL) are very rare in the literature. PCL injuries are often presented undiagnosed because of the weak signs of the injury compared to the anterior cruciate ligament (ACL) injuries. We report the surgical outcome of arthroscopic reconstruction of the chronic isolated PCL rupture with ipsilateral autologous hamstring tendon in a professional Caucasian dancer.

Methods: A 21-year-old male professional Caucasian dancer presented severe instability without any pain in his right knee lasting for one year. The patient did not describe any specific traumatic event but his both knees received repeatitive direct pretibial trauma during hyperflexion of the knee while landing to the floor. At the physical examination, posterior sagging of the tibia was observed on the affected side at 90o of knee flexion and step off test and posterior drawer test were positive preoperatively under general anesthesia. The Tegner Lysholm score was evaluated as 59 (poor). A magnetic resonance image (MRI) revealed the isolated total rupture of PCL. The treatment of choice was arthroscopic single bundle reconstruction of PCL with ipsilateral autologous hamstring tendon. A standard arthroscopic exploration of the joint was performed preoperatively and we didn't observe any meniscal, cartilage or ligamentous lesion. Anteromedial and anterolateral portals were made in order to visualize the posterior cortex of the tibia with a 70 degree scope. Intra-operative fluroscopy was used to confirm proper tunnel position. During postoperatively first week, the patient was allowed to mobilize nonweight bearing with the use of two crutches without functional knee brace. Quadriceps musculature and passive range of motion was trained.

Results: At the 6 month- follow-up, the patient achieved full symmetric restoration of motion. He had returned to full daily activies. The Tegner Lysholm score was evaluated as 95 (excellent) postoperatively. Functional examination of the right knee reveled 140 of flexion, and full knee extension. No posterior sagging was observed and step off test and posterior drawer test was negative. The complaint of instability was disappeared. At 1-year follow-up, clinical findings were unremarkable, with no sign of re-rupture and he returned to his professional career.

Conclusion: Surgical reconstruction technique of the PCL and associated rehabilitation protocols has not yet been fully standardized and much work still has be done optimizing correct treatment of PCL injuries. The arthroscopic reconstruction of chronic isolated PCL instability is a very difficult technique as well as its diagnosis. The reconstruction is very beneficial in the athletes and the patients who are not responding well to the conservative treatment.

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