

Treatment of Type 3 Arthrofibrosis Following Arthroscopic Reconstruction of ACL and Posterolateral Corner Injury with Tibia Plateau Fracture in a Professional Dancer: A Case Report

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Objectives: Arthrofibrosis is a serious complication following the reconstruction of anterior cruciate ligament (ACL) and posterolateral corner (PLC) injury. Loss of motion caused by arthrofibrosis can be disabling in young and active patients. We report the clinical results of the treatment of arthrofibrosis following arthroscopic reconstruction of ACL with ipsilateral hamstring tendon graft and surgically repairing PLC with 2 suture anchors in a 30 year-old professional dancer, treated with surgical lysis and manipulation under general anesthesia followed by aggressive physical therapy.

Methods: A 30 year-old male professional dancer presented with pain, effusion and severe instability in his left knee after falling in a dance event. The pain was evaluated on Visual analog scale (VAS) as 6 to 8. At the physical examination, anterior drawer test was evaluated as grade 3, pivot shift test, varus test, dial test and posterolateral drawer test were found positive. The Tegner Lysholm score was evaluated as 22 (poor). Under general anesthesia, left knee had tendency to external rotation and recurvatum when leg was suspended by toes. A magnetic resonance image (MRI) revealed the presence of a total ACL rupture, PLC injury and a fracture of lateral tibia plateau. The patient was treated with arthroscopic reconstruction of ACL with ipsilateral hamstring tendon graft fixed with endobutton through femoral tunnel and bio interference screw through tibial tunnel and PLC injury was treated with 2 suture anchors. Postoperatively first day, quadriceps musculature and active and passive ROM exercises was trained. During postoperatively third week, the patient was allowed to mobilize nonweight bearing with the use of two crutches without functional knee brace. At the sixth week, arthroscopic lysis was performed due to type 3 arthrofibrosis. At the tenth week, manipulation was performed to the left knee under general anesthesia.

Results: At the 3 month- follow-up, the patient achieved full symmetric restoration of motion and he had returned to full daily activities. The Tegner Lysholm score was evaluated as 94 (excellent) postoperatively. Functional examination of the left knee revealed 155 of flexion, and full knee extension. The complaint of instability was disappeared. At 9 month-follow-up, clinical findings were unremarkable, with no sign of re-rupture and arthrofibrosis and he returned to his professional dance career.

Conclusion: In the literature there is not any consensus regarding the management and rehabilitation intervention for arthrofibrosis in young athletes or professional dancers. The best treatment method is preventing the arthrofibrosis once it has occurred with surgical lysis and aggressive physical therapy. The combined surgical treatment and physiotherapy described in this case report may assist clinicians in the treatment of arthrofibrosis after arthroscopic reconstruction of ACL and PLC injury.

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