Orthopedic Sports Physical Therapy Knee Cases

Case I: 17-Year-old female with history of 5 previous knee surgeries. She has signed letter of intent to play soccer at D1 University. Prior surgeries include previous initial ACL surgery with hamstring tendon. She had problems with this initial surgery and was manipulated and graft was ruptured. Second surgery was with ACL allograft tissue, however due to tunnel enlargement she needed bone grafts into the tunnels before allograft surgery could be performed. Following bone graft procedure allograft ACL reconstruction was done. This surgery failed to incorporate and she began to have instability issues after she returned to playing soccer. She is now on her 5th operation and 3rd ACL reconstruction which was done with use of quadriceps tendon. Due to problems in past and history of incorporation issues her therapy was proceeded with caution. Weight bearing and ROM was initially limited. She had significant quadriceps atrophy and required various approaches to return her knee to full motion and strength. This case will detail her progression to full return to sports.

References:


**Case II**: 22 yo physical therapy student was playing intramural basketball when upon landing on her R leg alone had an awkward rotation on impact. She felt and heard a pop which she recognized well as her L and R ACL’s had been reconstructed 21 and 9 months previously. The two previous surgeries were performed using hamstring autografts. She had completed her most recent R knee rehabilitation 3 months ago and had been functioning adequately in her words. She went to her home physician who recommended doing an allograft. She asked for “local” recommendation which resulted in her R knee being done for the 2nd time – using an ipsilateral patellar tendon autograft and repair of the lateral meniscus. It was noted during surgery that there was some attenuation of the posterior lateral corner (recent injury) but there was only a minimally increased dial test. The surgeon believed that this was not significant enough to require attention. Early post-operative management was directed to regaining full extension but not allowing the normal weight bearing progression to both address meniscal healing and possible impact on the posterior lateral corner. The presentation will follow her challenges in progression and long term recommendations for joint health.

**References:**


**Case III**: Concerns exist regarding several rehabilitation and return to play criteria in patients following Anterior Cruciate Ligament Reconstructive surgery.

Specific areas of concern include:

- Timing of return of full knee extension, knee flexion
- Restoration of full knee hyperextension

**THIS IS A PRELIMINARY HANDOUT. FULL HANDOUT WILL BE POSTED ON SPTS WEBSITE**
• Restoration of secondary plane ROM following knee injuries
• Timing of return to sport and subsequent re-injury
• Return to the same level of competition following surgery
• Age-related re-injury rates
• Osteoarthritis and the ACL injured knee

Multiple case studies will be presented with each including a review of the current literature with discussion of the current controversies in rehabilitation and return to play following Anterior Cruciate Ligament Reconstructive surgery.


Shelbourne KD, Freeman H, Gray T. Osteoarthritis after ACL reconstruction. The importance of regaining full ROM. Sports Health 2012;4:79-85


Clagg S, Paterno MV, Hewett TE, Schmitt LC. Performance on the modified star excursion balance test at the time of return to sport following ACL reconstruction. J Ortho Sports Phys Ther 2015;45:444-452


