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Return to Soccer Following Anterior Cruciate Ligament Reconstruction

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Summary:
Early return to play (< 6 months post-op) for soccer players, following ACL reconstruction, is not correlated with higher complications or a worst outcome, and a high percentage of soccer players can return to competitive play following this procedure, when strict criteria that dictate time to return to play are followed

Abstract:
INTRODUCTION AND PURPOSE
Anterior cruciate ligament injury is a career-threatening injury for soccer players. However, very few studies specifically focusing on return to competitive soccer following this serious injury exist.
The aim of this study is to identify in a group of soccer players following anterior cruciate ligament reconstruction (ACLR): a) when do they return to play (RTP), b) at what level, c) whether they retain this level, and d) which factors influence the outcome.

METHODS
Inclusion criteria were: Male, soccer players (pre-injury Tegner score >6), surgically treated with an ACLR, with a minimum follow-up of 12 months following RTP.

All patients were operated by a single surgeon and followed the same rehabilitation protocol post-op.

Data on demographics, associated injuries, type of treatment, and outcome in terms of RTP were recorded for all patients. Time to RTP was defined as the time period from surgery to participation at a full-length game.

Statistical analysis was performed using Fischer's exact test for proportions and Student's t-test for continuous variables. All tests were two-tailed and a p-value <0.05 was considered statistically significant.

RESULTS
Seventy-nine cases (78 patients) were included in the study. Mean age was 22.9 years (range 14 – 36). Twenty-four cases had a pre-injury Tegner score of 7, and 55 were Tegner 9.

Graft selection was hamstrings autograft in 72 cases, bone - patellar tendón - bone (BPTB) in six, and quadriceps autograft in one. In 41 cases there were associated injuries in the knee. There were 40 cases with a meniscal tear, which were treated with either repair or partial meniscectomy. There were two cases with an associated medial collateral ligament injury, and five cases with a cartilage grade 3 or 4 defect.
Mean follow-up was 43 months, with a range of 3 to 121 months.

In 78 cases (99%) the patient returned to competitive soccer in an average time of 6.6 months (range 4 – 10). Seventy four patients (94%) returned to their pre-injury level of activity, while 4 returned to a lower level. At the last follow-up another three patients were playing at a lower level than the one at the time of RTP.

Ten patients (13%) had a graft failure.

No statistically significant correlation between graft failure and age, presence of associated injuries or time to RTP was found.

Patients with a medial meniscus injury were more likely to return to play at a lower level (p=0.019). RTP was statistically faster in patients with a pre-injury higher Tegner level (p=0.007). There was no graft failure, other complication or decline at level of activity in patients that returned to play earlier than 6 months post-op compared to ones that returned at 6 months or more.

CONCLUSION
A high percentage of soccer players can return to competitive play following ACL reconstruction, when strict criteria that dictate time to RTP are followed. Early return to play (< 6 months post-op) for soccer players that meet these criteria, is not correlated with higher complications or a worst outcome.