Return to Training and Playing After Posterior Ankle Arthroscopy in Elite Professional Soccer

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Summary:
Results of a series of 27 consecutive posterior ankle arthroscopies for posterior ankle impingement in elite soccer players.

Abstract:
Introduction
The symptoms of posterior ankle impingement are of chronic pain, with or without swelling at the back of the ankle. Ballet dancers are classically prone to this condition but other activities such as soccer, basketball, and running can contribute to its development. When conservative treatment fails, operative intervention is indicated. Traditionally this involved an open approach. More recently posterior ankle arthroscopy has been employed. We report the first series of results from an exclusively elite athlete population.

Method
We looked retrospectively at a prospectively compiled database of a consecutive series of elite professional soccer players on whom we have performed posterior ankle arthroscopy for both bony and soft tissue posterior ankle impingement syndrome (PAIS) over the past 5 years. (Minimum 1 year follow up). We reviewed our clinical and operative notes and those of the Football Association (FA) medical team. We also contacted all of the player’s physiotherapists to confirm the data. Statistical analysis was performed using MedCalc for Windows, version 9.6.4 (MedCalc software, Mariakerke, Belgium).

Results
One player had been transferred to an Italian team and was lost to follow up leaving 27 out of 28 players in the study.

The average age of the players was 25 (18-32). 5 had a diagnosis of soft tissue impingement and underwent debridement with FHL release. 13 had a symptomatic os trigonum which was excised arthroscopically and 9 had a bony pull off fragment from the posterior ankle ligament complex which was excised and the FHL was released.

The average length of symptoms prior to surgery was 8 months (3-18). The mean length of time to return to training post operatively was 34 days (24-54) and return to playing was 41 days (29-72).

Significant correlations were found between the length of symptoms and the number of pre operative injections (Spearman's rank correlation coefficient = 0.806. p
There was no correlation between the number of pre operative injections and return to training (Correlation coefficient = 0.053. p=0.794) or the number of pre operative injections and return to play (Correlation coefficient = 0.016. p=0.938).

Return to training was significantly faster after soft tissue debridement with FHL release than after bony surgery (p=0.046 Kruskal-Wallis test). When comparing return to play between these operations there was a similar trend but this did not reach statistical significance (p=0.078).

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There was one surgical complication in the form of a persistent portal leakage post operatively. This was successfully treated by resting the ankle in a boot for 2 weeks. One patient had recurrent symptoms 3 months after surgery; this was successfully treated with an ultrasound guided injection and he remains
symptom-free 18 months later. There were no infections and no incidence of neurovascular damage.

**Conclusion**
Posterior ankle arthroscopy is safe and effective in the treatment of posterior ankle impingement syndrome in the elite soccer player with return to training expected at an average of 7 weeks.