Syndesmosis and Lateral Ankle Sprains in the National Football League

Presenting:

Daryl O. Osbahr, MD (Birmingham, Alabama)
Mark C. Drakos, MD; Padhraig F. O'Loughlin, MD; Stephen Lyman, PhD; Ronnie P. Barnes, MA, ATC; John G. Kennedy, MD, FRCS (Orth); Russell F. Warren, MD

Summary

Syndesmosis sprains in the NFL can be a source of significant disability compared to lateral ankle sprains. Successful return to play with non-operative management can be achieved for both syndesmosis and lateral ankle sprains. With modern treatment algorithms for syndesmosis sprains, more aggressive non-operative treatment is necessitated. Although return to play will be delayed when compared to lateral ankle sprains, the time loss from participation is not as prolonged as previously reported in the literature.

Introduction

Syndesmosis compared to lateral ankle sprains in the National Football League (NFL) can present a significant source of disability with non-standardized treatment methods and an ill-defined algorithm for return to play. This study evaluated diagnostic, treatment, and outcome measures of syndesmosis and lateral ankle sprains in NFL football players to better enable orthopaedic surgeons to identify and manage these complex injuries.

Methods

All syndesmosis and lateral ankle sprains from a single NFL team database were reviewed over a 15-year period, and all 32 NFL team physicians completed a questionnaire detailing their management approach to these injuries. A comparative analysis was performed analyzing several variables, including diagnosis, treatment methods, and time loss from participation. Descriptive and/or statistical analysis was then performed for all variables. An independent sample t-test with corresponding p-values were then calculated for foot and ankle protective gear, playing surface, field condition, mechanism of injury, place of injury, and time loss from participation.

Results

36 syndesmosis and 53 lateral ankle sprains occurred in our cohort of NFL players during the 15-year study period. The mechanism of injury most often resulted from direct impact in the syndesmosis group and torsion in the lateral ankle sprain group (p=0.034). All players in both groups were managed non-operatively. Time loss from participation was 15.4 days in the syndesmosis group and 6.5 days in the lateral ankle sprain group (p<0.001). NFL team physicians vary their treatment for syndesmosis sprains depending upon the category of diastasis, including immobilization for no diastasis, variability of treatment depending upon imaging results for latent diastasis, and surgery for frank diastasis. Most team physicians recommended non-operative management with a form of immobilization and weight-bearing as tolerated for lateral ankle sprains.
Conclusion
Syndesmosis sprains in the NFL can be a source of significant disability compared to lateral ankle sprains. Successful return to play with non-operative management can be achieved for both syndesmosis and lateral ankle sprains. With modern treatment algorithms for syndesmosis sprains, more aggressive non-operative treatment is necessitated. Although return to play will be delayed when compared to lateral ankle sprains, the time loss from participation is not as prolonged as previously reported in the literature.