Optimal Time to Return to Play and Performance After Jones Fracture Surgery in the National Football League

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Introduction/Purpose: While rare, Jones fractures represent an acute and devastating injury to National Football League (NFL) players. Although Jones fractures in the general population have been researched extensively, not much is known about the epidemiology and post-injury effects of these fractures on the professional football athlete. Furthermore, early season injuries to high-profile NFL players have led to an increased pressure to return to play more quickly. It is unknown how this accelerated timeline to recovery affects post-injury performance and post-surgical complications necessitating repeat surgeries. Therefore, the objectives of our study were to produce an updated epidemiology of Jones fractures and analyze how quicker recovery times affect post-injury performance and re-fracture rates in NFL players.

Methods: Several online sources including a compiled injury database provided by FantasyData, NFL news sites, and injury reports were cross-referenced to conduct a retrospective identification of all NFL players sustaining a Jones fracture injury necessitating surgery from the 2010-2015 NFL seasons. For each injury, time to recovery and return to play was obtained, and players were separated into two groups: those returning to play in less than 9 weeks from surgery and those returning greater than 9 weeks after surgery. Each included player was followed to identify repeated surgeries for the same injury. Yearly player performance metrics were also obtained and recorded for all players. An "approximate value" algorithm, commonly used to standardize and track player production across positions, was adapted to calculate yearly performance values for each injured player up to 3 years before and after each Jones fracture surgery, allowing each player to serve as his own control.

Results: 42 Jones fractures were identified during the 2010-2015 NFL seasons. 15 players returned to the field in 9 weeks or less after surgery, with 9 requiring a second Jones fracture surgery. 27 players returned to the field greater than 9 weeks after surgery, with 4 requiring a repeat surgery. There was an average decrease in performance by 53.2% in those players returning in 9 weeks or less after their first Jones fracture surgery, compared to a 9.4% increase in performance in those players returning after at least 9 weeks from their first Jones fracture surgery.

Conclusion: The results of this study suggest that a quickened timeline to recovery after Jones fracture injuries to NFL players can lead to poorer outcomes. There was a statistically significant greater increase in need for second Jones fracture surgery and greater decrease in performance for players returning to play in less than 9 weeks after Jones fracture surgery. Although professional players are frequently pressured to return to play as quickly as possible after these injuries, it may be more advantageous in terms of post-injury performance and career longevity to extend the timeline for recovery.

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