Performance-Based Outcomes after Operative Management of Athletic Pubalgia / Core Muscle Injury in National Football League Players

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Objectives: Athletic pubalgia is a condition in which there is an injury to the core musculature that precipitates groin and lower abdominal pain, particularly in cutting and pivoting sports. These are common injury patterns in the National Football League (NFL); however, the effect of surgery on performance for these players has not been described.

Methods: Athletes in the NFL that underwent a surgical procedure for athletic pubalgia / core muscle injury (CMI) were identified through team injury reports and archives on public record since 2004. Outcome data was collected for athletes who met inclusion criteria which included total games played after season of injury / surgery, number of Pro Bowls voted to, yearly total years and touchdowns for offensive players and yearly total tackles sacks and interceptions for defensive players. Previously validated performance scores were calculated using this data for each player one season before and after their procedure for a CMI. Athletes were then matched to control professional football players without a diagnosis of athletic pubalgia by age, position, year and round drafted. Statistical analysis was used to compare pre-injury and post-injury performance measures for players treated with operative management to their case controls.

Results: The study group was composed of 32 NFL athletes who underwent operative management for athletic pubalgia that met inclusion criteria during this study period, including 18 offensive players and 16 defensive players. The average age of athletes undergoing this surgery was 27 years old. Analysis of pre- and post-injury athletic performance revealed no statistically significant changes after return to sport after surgical intervention; however, there was a statistically significant difference in the number of Pro Bowls that affected athletes participated in before surgery (8) compared to the season after surgery (3). Analysis of durability, as measured by total number of games played before and after surgery, revealed no statistically significant difference.

Conclusion: National Football League players who undergo operative care for athletic pubalgia have a high return to play with no decrease in performance scores when compared to case-matched controls. However, the indications for operative intervention and the type of procedure performed are heterogeneous. Further research is warranted to better understand how these injuries occur, what can be done to prevent their occurrence, and the long term career ramifications of this disorder.

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