

CASE REPORT

A MULTIDISCIPLINARY APPROACH TO THE REHABILITATION OF A COLLEGIATE FOOTBALL PLAYER FOLLOWING ANKLE FRACTURE: A CASE REPORT

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ABSTRACT

Background and Purpose: Multiple rehabilitation factors including overall wellness need to be considered when an athlete returns to sport after an injury. The purpose of this case report is to describe a multidisciplinary approach for return to sport of a Division I collegiate football player following a traumatic ankle fracture requiring surgical repair. The assessment and treatment approach included the use of a performance-based physical therapy outcome measure, self-reported functional abilities, body composition assessments, and nutritional counseling.

Case Description: A 21 year-old running back fractured his lateral malleolus due to a mechanism of injury of excessive eversion with external rotation of the ankle. Surgical intervention included an open reduction internal fixation (ORIF) of the fibula and syndesmosis. In addition to six months of rehabilitation, the patient received consultations from the team sports nutritionist specialist to provide dietary counseling and body composition testing. The Comprehensive High-level Activity Mobility Predictor-Sport (CHAMP-S), a performance-based outcome measure, self-report on the Foot and Ankle Disability Index (FADI-ADL, FADI-S), and body composition testing using whole body densitometry (BOD POD®), were administered throughout rehabilitation.

Outcomes: The subject was successfully rehabilitated, returned to his starting role, and subsequently was drafted by a National Football League (NFL) franchise. High-level mobility returned to above pre-injury values, achieving 105% of his preseason CHAMP-S score at discharge. Self-reported function on the FADI-ADL and FADI-Sport improved to 100% at discharge. Body fat percentages decreased (13.3% to 11.9%) and fat mass decreased (12.0 kg to 11.0kg). Lean body mass (78.1 kg to 81.5 kg) and lbm/in increased (1.14 kg/in to 1.19 kg/in). His BMI changed from 29.8 kg/m² to 30.6 kg/m².

Discussion: This case report illustrates the positive effects of a multidisciplinary approach where combining physical therapy and nutritional counseling demonstrated value with return to sport preparation and success following ankle fracture. A targeted physical therapy program combined with a personalized nutrition intervention based on body composition assessment assisted this athlete in avoiding deconditioning (atrophy, decreased aerobic capacities, and increases in body fat) often observed during postoperative care.

Level of Evidence: 5

Key words: ankle fracture, American football, CHAMP-S, FADI, whole body densitometry

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