Surgical Outcomes of Severe Turf Toe Injuries in High-Level Football Players
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Introduction/Purpose: Turf toe is a term used to describe a hyperextension injury to the first metatarsophalangeal joint. Although the vast majority of turf toe injuries can be treated successfully without surgical intervention, there are instances where surgery is required to allow the athlete to return to play. Surgical turf toe repair restores the continuity of the plantar plate structures, re-establishes stability, and simultaneously addresses any sesamoid pathology or cartilage lesions. Although there is extensive literature on turf toe injuries and its nonoperative management, there are currently no reports on surgical outcomes in athletes larger than three to four patients.

Methods: After obtaining Institutional Review Board approval, we attained all cases of turf toe repair according to the ICD-10 procedural code. The inclusion criteria included: age greater than 16, turf toe injury requiring operative management and at least a varsity level high school football player. Our patient population consisted of thirteen patients. Their charts were reviewed for age, BMI, level of competition, injury mechanism (if known), football position, setting of injury (practice or game) and playing surface. In addition, we recorded the specifics of the surgical procedure, a listing of all injured structures, the surgical implants used and the great toe range of motion at final followup visit. In addition, a followup survey was administered to all patients.

Results: The average patient was 19.5 years old with an average followup time of 21.4 months. Our group consisted of six linemen and seven skill position players. There was one semiprofessional player, ten collegiate players and two high school players. Eight of the 13 patients had complete rupture of both fibular and tibial phalangeal sesamoid ligaments while five patients had a partial injury. Seven of the patients had a suture only primary repair while in six patients suture anchors were utilized. The average playing time missed was 16.4 weeks. No patient had to stop playing football or change positions due to the injury or surgery. At final followup, the average patient had a VAS pain score of 0.21.

Conclusion: Severe turf toe injuries are often debilitating and may require operative management to restore a pain-free, stable, and functional forefoot. The injuries sustained and procedures performed were variable in our patient population but every player was able to return to play at a high level with the use of a custom orthotic placed inside their cleat. This study represents the largest cohort of operatively treated severe turf toe injuries in the literature and demonstrates that good clinical outcomes can be expected with surgical repair.

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