Missed Peritalar Injuries: A Retrospective Review

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Summary: Missed peritalar injuries can lead to significant morbidity to the patient. We have proposed a treatment algorithm as well as a review of radiographic clues for peritalar injuries.

Methods: Using the institution’s billing database, ten ICD-9 codes commonly used to classify missed peritalar injuries were queried. Results of the current review included 150 patients. To date, 13 patients have been identified with missed peritalar injuries and were included in this study. Based on query results, a chart review and radiographic analysis were conducted to search for both demographic and injury data, such as age, BMI, gender, mechanism of injury, associated injuries, treatment at initial injury. Additionally, each fracture was also classified using the OTA fracture classification system.

Results: Using the chart review and radiographic analysis data, an algorithm was developed to improve identification of commonly missed peritalar fractures at the time of injury. The protocol categorizes foot and ankle injuries based on mechanism of injuries (high energy vs. low energy) and patient demographics as well as providing direction on additional radiographic examinations to improve patient evaluation and first-time diagnosis of peritalar injuries.

Conclusions: Missed peritalar injuries are a relatively common occurrence secondary to the complex anatomy and imaging required to correctly identify peritalar injuries. After review of missed injuries seen at our institution we have developed a review of characteristic radiographic clues as well as an algorithm for approaching injuries to the foot and ankle. With this proposed algorithm it is possible to limit the number of missed injuries.