



COMMINUTED PROXIMAL PHALANGEAL FRACTURE IN A DIVISION 1 FOOTBALL PLAYER

Kelly Reese Farmer (Charlie Hicks-Little)

Department of Athletic Training



Background: A 22-year-old healthy male division 1 center football player sustained an injury to his right hand. After finishing a series, the athlete went to the head athletic trainer and team physician to get his finger evaluated. He stated that he did not recall exactly how he injured his hand. Upon removing his glove, his fingers immediately swelled and filled tightly with fluid. The team physician and head athletic trainer evaluated the player by testing ligamentous strength, grasp strength, percussion test, and did not suspect a fracture but thought it was presenting more as a contusion. They taped his finger around the joints for stability and had the player put his finger on ice when he wasn't on the field playing. The player did not complain of finger pain but noticed a loss in range of motion in his fingers. After the game, the player was provided ice bags to keep on his hand and fingers in order to help control and decrease the swelling. The day after the game, the athlete came to the athletic training facility to receive treatment and have his finger re-assessed. **Differential Diagnosis:** Fracture of the proximal phalange, dislocation of the proximal phalange at the metacarpal joint, acute compartment syndrome of the second and third finger, contusion of the posterior side of the hand. **Treatment:** Upon re-assessment of his finger by the head athletic trainer and team physician, the player was taken to the hospital to receive x-rays. X-rays revealed a comminuted fracture at the proximal end of the second proximal phalange. The fractures were located at the proximal end of the bone and at the metacarpophalangeal joint. The athlete was placed in a finger immobilizer splint that kept his finger in 45 degrees of flexion in order to stabilize the joint. The athlete was held from any football activity for 2 weeks and had to always wear his finger brace. The athlete received treatment everyday consisting of a slush bucket of ice and water, diathermy, and hivamat. Progressively the swelling decreased in his fingers and slowly the player started getting sensation and range of motion back in his finger. After week two, the athlete was sent to receive more x-rays. These x-rays revealed that the bones were reuniting and healing properly. The athlete was cleared to play as long as he wore his finger brace, primarily used his left hand to snap the ball and had his hand taped before practice and games. In order to return to his position of center, the athlete practiced snapping the ball left handed with the athletic training staff. The athlete was cleared to play as long as he wore his finger brace, primarily used his left hand to snap the ball and had his hand taped before practice and games. In order to return to his position of center, the athlete practiced snapping the ball left handed with the athletic training staff.

Uniqueness: Comminuted finger fractures are not uncommon, but the uniqueness of this case is that the fractures are at the proximal end of the bone at the joint capsule and not along the long shaft of the bone. Due to the fracture location, the player was withheld from activity for two weeks where normally the player would be able to continue activity with a finger splint. **Conclusion:** A 22-year-old male football athlete sustained a proximal comminuted finger fracture of the second proximal phalange. His finger was placed in a brace that kept his finger flexed at 45 degrees in order to protect the metacarpophalangeal joint. The athlete was held out of activity for two weeks and received constant treatment. After two weeks and follow-up x-rays, the athlete was cleared to play with a brace protecting his hand. This case is important because it provides a basis for rehabilitation for comminuted finger fractures located at the joint. It also reiterates the importance of obtaining x-rays on suspected bone injuries.

