

## **Case Study: Treating the Terrible Triad Elbow injury**

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**Background:** The terrible triad is a complicated injury involving fracture of the humerus and/or radial head, ligament injury of the ulna collateral and often the medical collateral ligaments, posterior dislocation and at times, soft tissue injury of the extensor tendons. A research of the literature was performed to determine guidelines for progression and precautions based on the injuries commonly referred to as the Terrible Triad. This led to the development of a protocol for treatment that is continuing to evolve.

**Purpose:** Few articles are available on the therapeutic management for the terrible triad injury. This injury often results in elbow and forearm limitations and often has shoulder, wrist and hand dysfunction as well. This case study outlines the challenges of treating this injury.

**Subject:** C.C. is a 48 year old female who was taking her dog out to the patio and tripped on the lease on 11/25/10. She was seen in the ED and noted to have an elbow fracture involving the ulna and the radial head and a posterior dislocation which was reduced by the patient. She was referred to Dr. Dyer for management of the injury and taken to surgery on 12/02/10. Surgery involved ORIF of the right elbow periarticular fracture dislocation including ORIF of radial head and proximal ulnar fracture; repair of the lateral collateral ligament; repair of the annular ligament and repair of common extensor origin. She was referred to therapy on 12/13/10 for splinting and to initiate motion of the elbow.

**Outcome:** At discharge, C.C.'s range of motion was still limited in the shoulder and elbow. Elbow range of motion was 39 degrees to 147 degrees. Shoulder flexion was 135 degrees and abduction 134 degrees. Pain was 0-1/10 at rest and with activity and at worse 2/10. Grip strength was appropriately 50% of the right dominant hand. Function had increased significantly. C.C. was still noting some difficulty with functional tasks at time of discharge. Patient may undergo hardware removal in the future.

**Conclusion and Discussion:** This injury is complex but can result in a good outcome of function. Few articles giving outcomes and guidelines for therapeutic management are available. Since this patient; four additional patients have been referred with varying presentations of the terrible triad.