Background: The patient is a 19 year-old male college student with complaints of left upper arm pain secondary to a unique rope swing accident. The patient reported that he was swinging from a rope swing and jumping into a river approximately ten feet below when, upon releasing the rope, his left arm became entangled in the rope, resulting in traction type mechanism of injury to the left upper extremity. The patient fell to the water and emerged complaining of immediate pain in the left brachial region. He also reported dysesthesia and tingling in the dorsum of the left forearm and first web space of left hand, as well as weakness in wrist extension and finger flexion. Visual Inspection revealed edema in the left brachial region, not extending below the elbow. A circumferential abrasion was visible over the left upper arm where the rope had become entangled. Active and passive range of motion of the left elbow was limited in both flexion (80 degrees) and extension (-60 degrees). Strength testing revealed significant left upper extremity weakness. Sensation testing demonstrated mild deficits over the dorsal forearm and the first web space of the left hand. Initial diagnosis in the emergency room was a severe rope burn and the patient was instructed to ice and elevate the left upper extremity. Differential Diagnosis: Differential diagnosis in this patient included brachial nerve injury, muscular trauma, shoulder dislocation and humerus fracture. Treatment: MRI revealed significant tissue damage and hemorrhage of the left triceps brachii and biceps brachii muscle, as well as an oblique tear of the left brachialis muscle at its origin. Needle EMG testing demonstrated abnormal recruitment patterns of the extensor carpi radialis and extensor indices. Preoperative diagnosis for this patient was complete laceration of the left biceps brachii, brachioradialis and triceps brachii muscles, with associated radial nerve palsy. The patient underwent surgical repair of the injured muscles. One month following surgery, the patient was referred for rehabilitation. Initially, the patient was limited to range of motion exercise only. Three weeks after initiating rehabilitation, the patient was allowed to progress to light strengthening exercise. At this time, the patient has regained full elbow range of motion and continues to demonstrate improvement in left upper extremity strength and function. Uniqueness: This case is unique in that it occurred during recreational physical activity. The mechanism of injury and the severity of the injury are also quite unique. Conclusions: The patient’s initial misdiagnosis and failure to be referred demonstrate the importance of completing a thorough evaluation of all injuries.