

A Novel Technique for the Treatment of Scapular Body Fractures with Associated Glenohumeral Dislocation Treated with Contoured Oral Maxillofacial Reconstruction Plate

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Purpose: Scapular body fractures with glenohumeral dislocations are rare injuries that only account for 3% to 5% of all fractures to the shoulder girdle. To date, there are no fragment-specific instrumentation systems that address irregular scapular body fracture patterns. We present a novel technique for the treatment of a scapula body fracture with glenohumeral dislocation utilizing an intraoperatively contoured oral maxillofacial reconstruction plate.

Methods: In this case presentation, a 64-year-old alcoholic male presented to our institution with a 2-week history of atraumatic left shoulder pain and swelling and imaging demonstrating a scapula body fracture with glenohumeral dislocation. The patient was placed in lateral decubitus position; a modified, extensile Judet approach was performed; and a window was utilized through a defect in the deltoid to further expose the fracture anteriorly. The patient was found to have a massive rotator cuff tear that was repaired with #2 FiberWire utilizing a marginal convergence technique. Bone tunnels were created across the clavicle and distal acromial arch and secured with FiberWire to approximate the acromioclavicular joint. The scapular spine and body fracture were visualized, prepared, and a 2.7-mm oral maxillofacial reconstruction plate was contoured to the entire scapular spine extending out to the tip of the acromion. The plate was fixed with 2.7-mm cortical screws and reinforced with locking screws. Postoperatively, the patient was non-weight-bearing in a sling for immobilization for 6 weeks. His incision healed well without wound complications or infection and he was sent to physical therapy for 6 weeks.

Results: At follow-up the patient shows maintenance of hardware position and anatomic reduction of the prior fracture.

Conclusion: There is no consensus on the ideal operative technique for scapula fractures and fragment-specific systems are scarce. Our novel technique allows for rigid internal fixation, early mobilization, and fracture healing.

