

Osteoporotic Proximal Humerus Fracture Dislocations: Should You “Give It a Try” in the Emergency Department?

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Purpose: Shoulder dislocations in elderly or osteoporotic patients can represent a challenging management scenario in the emergency department (ED) due to concern for the presence of occult fractures that may displace during a reduction attempt. The alternative, closed reduction attempt in the operating room, has the benefit of full paralysis but requires additional resource utilization. There currently exist no guidelines or recommendations to help guide physicians with this decision.

Methods: This is a retrospective case review of patients over age 55 years with shoulder dislocations seen in the ED at a Level-I trauma center over a 10-year period. The decision to perform closed reduction attempt in the ED or in the operating room (OR) was made by the attending surgeon on call. Imaging and medical records were reviewed to evaluate whether the reduction attempt was successful, unsuccessful without worsening, or unsuccessful with worsening alignment of the fracture, as well as the ultimate clinical outcome.

Results: 178 patients were identified with shoulder dislocations: 57 with simple dislocations without a known fracture and 121 with fractures (73 with isolated greater tuberosity fractures, 8 with nondisplaced but visible humeral neck fractures, and 40 with a displaced humeral neck fracture). Of the 57 simple fractures, 37 were able to be closed reduced in the ED, while the remaining 20 had a failed reduction in the ED followed by a successful closed reduction in the OR. None had new fractures that displaced. Of the 121 remaining patients with a fracture, closed reduction in the ED was attempted in 96 patients, while the remaining 25 had the initial reduction attempt in the OR. Of the 121 patients with an ED reduction, 9 (7.4%) had fracture displacement during the attempt that altered their clinical outcomes, while 0 of 25 with an initial reduction attempt in the OR had displacement. Of the subset of 8 patients with nondisplaced fractures, displacement occurred in 3 patients (38%). Of the 40 patients presenting with displaced fracture dislocations, closed reduction was ultimately successful in 16 patients (40%), 14 of whom were ultimately successfully treated without surgery.

Conclusion: Careful closed reduction of simple shoulder dislocations in osteoporotic patients may be safe in the ED, but close scrutiny of the injury films is essential, as a reduction attempt on a patient with a known fracture may cause displacement. For patients with displaced fracture/dislocations, closed reduction and nonoperative management can still be successful in select patients.