

Bilateral Posterior Fracture-Dislocation of the Proximal Humerus after First-Time Seizure

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Background

Fractures of the proximal humerus are commonly associated with osteoporosis and comprise 5.7% of all adult fractures [1]. Posterior dislocations of the shoulder comprise 2-5% of all shoulder dislocations, and when bilateral are even more infrequent, occurring less than 5%. [2,3]. Posterior dislocations are often associated with motor vehicle accidents, seizures, or electrical shock [4]. Fracture-dislocations of the proximal humerus occur in only 1% of all shoulder dislocations, thus making posterior fracture-dislocations off the proximal humerus exceedingly rare [5]. In this case report, we present a previously undescribed case presentation and treatment for bilateral posterior fracture-dislocations of the proximal humerus [7,8,9,10,11,12,13,14,15]. The purpose of sharing this case is to describe treatment options for a rarely encountered orthopedic trauma presentation, as there is currently a lack of existing medical literature.

Case Presentation

A sixty-one-year-old male was evaluated for the seizure at a hospital in Costa Rica and was medically cleared. He was subsequently evaluated at a Veteran's Affairs hospital upon his return to the United States, now complaining of bilateral shoulder pain and difficulty with shoulder range of motion. Radiographs were obtained and revealed bilateral four-part posterior fracture-dislocations with severe comminution. The patient was placed in bilateral slings and asked to follow up with an outside orthopedic surgeon. Upon presentation to our service and after evaluation and review of the imaging, bilateral reverse total shoulder arthroplasties were recommended. Our indications included the presence of bilateral rotator cuff arthropathy with an obvious superior translation of the humeral head, the presence of glenohumeral arthritis, and the chronicity of the injury, as no reduction had previously been attempted. He was agreeable with the treatment plan and successfully underwent bilateral reverse shoulder arthroplasties.

Discussion

The purpose of our case report is to present and discuss a previously undescribed orthopedic presentation and treatment of chronic bilateral four-part fracture-dislocation of the proximal humerus. While open reduction internal fixation, total shoulder arthroplasty or hemiarthroplasty may be acceptable options in some select patients, reverse shoulder arthroplasty offers a predictable outcome in terms of pain relief and decreased need for a second surgery in our specific patient. The presence of rotator cuff arthropathy, glenohumeral arthritis, pre-existing shoulder pain, and chronic posterior dislocations, made our treatment a relatively straight forward choice for this patient.

Preoperative Imaging



Figure 1: Preoperative CT right shoulder CT axial cut



Figure 2: Preoperative CT left shoulder CT axial cut



Figure 3: Preoperative CT right shoulder CT sagittal cut



Figure 4: Preoperative CT left shoulder CT sagittal cut



Figure 5: Preoperative CT right shoulder CT coronal cut



Figure 6: Preoperative CT left shoulder CT coronal cut

Postoperative Imaging

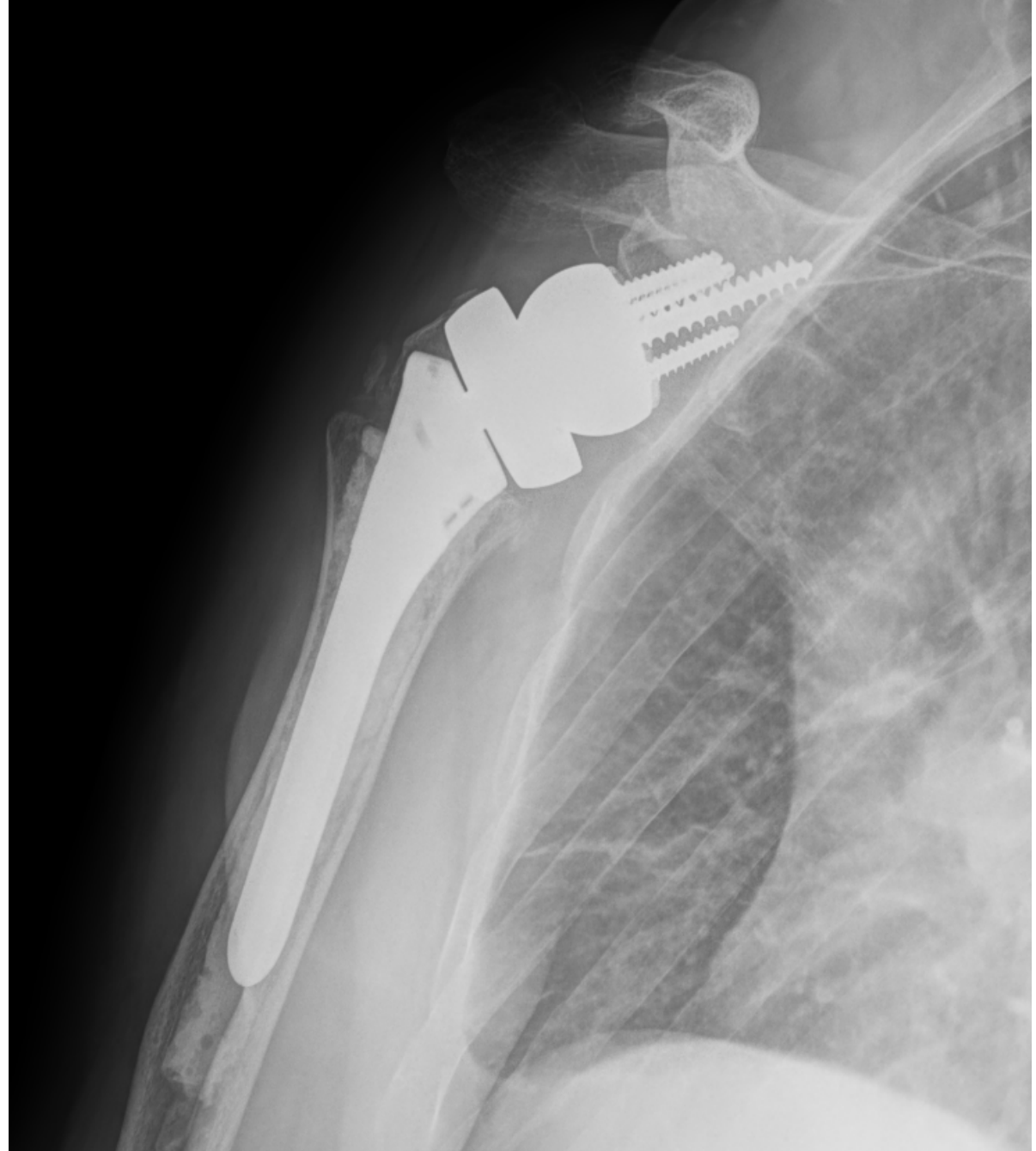


Figure 7: Postoperative radiograph right shoulder: AP Grashey view



Figure 8: Postoperative radiograph left shoulder: AP Grashey view

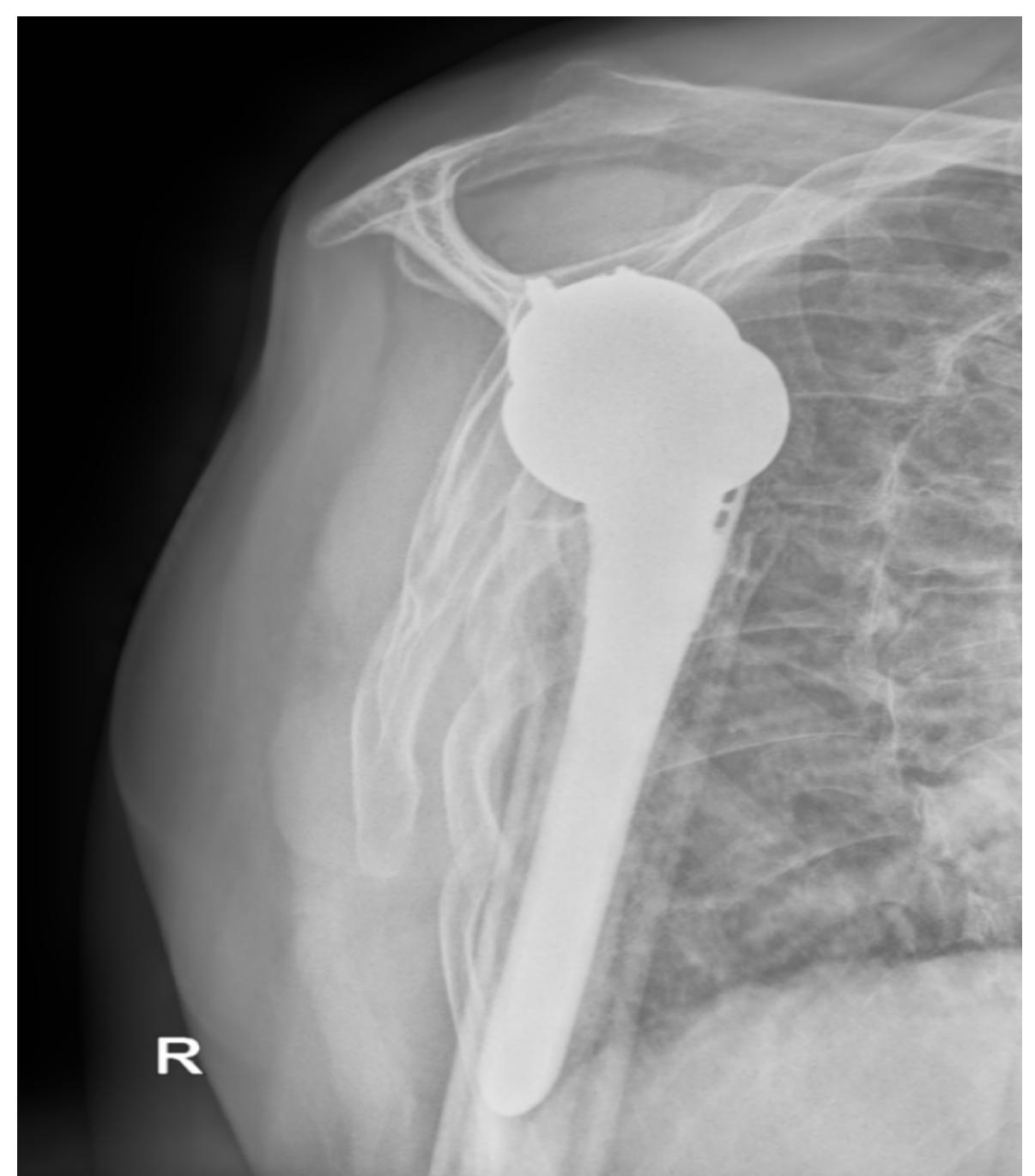


Figure 9: Postoperative radiograph right shoulder: Scapular Y view



Figure 10: Postoperative radiograph left shoulder: Scapular Y view

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