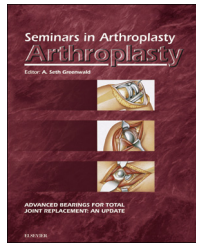
Seminars in Arthroplasty 25 (2014) 76–87

Available online at www.sciencedirect.com

ScienceDirect

www.elsevier.com/locate/semanthroplasty



What would you do? Challenges in shoulder surgery

*Eugene W. Brabston, MD, and Louis U. Bigliani, MD**

Department of Orthopaedic Surgery, Center for Shoulder, Elbow, and Sports Medicine, Columbia University, New York, NY

ARTICLE INFO

Keywords:
glenohumeral arthritis
hemiarthroplasty
total shoulder arthroplasty
rotator cuff arthropathy

ABSTRACT

The treatment of glenohumeral joint disorders presents a challenge to the orthopedic provider. The adept shoulder surgeon must be facile with the management of both primary and complex shoulder pathologies. The cases presented are represented for their complexity and to present management principles that are fundamental to appropriate treatment of both simple and complex glenohumeral diseases. Furthermore, these cases are presented in the light of complex decision making regarding arthroplasty and the older active patient.

1. Case 1: Treatment of glenohumeral osteoarthritis in an older active patient

A 71-year-old male presented to the clinic with complaints of right shoulder pain and stiffness. He stated that his pain had been present for many years and is especially notable with his activities. He is extremely active and his activities include outdoor activities and exercising. Of note, the patient stated in the clinic that he is able to do at least 100 push-ups on his knuckles in a single setting. His past medical history is otherwise unremarkable for significant medical disease or prior shoulder treatment. His physical exam is notable for active forward elevation to 140° and active external rotation to approximately 25°. He has negative impingement signs and also does not have acromioclavicular joint pain with palpation or a negative cross-arm test. Upon testing his rotator cuff, he demonstrates that all four are intact with internal and external lag signs absent. The patient furthermore demonstrates that he is neurologically intact with axillary sensation preserved over the lateral upper arm and has intact deltoid strength.

Standard x-rays of the right shoulder are shown in Figure 1 revealing glenohumeral osteoarthritis with joint space narrowing, inferior osteophyte formation, some sclerosis, and minimal posterior subluxation without concomitant wear on axillary views. Furthermore, there was no significant evidence of decreased acromiohumeral distance. The patient was sent to the clinic and an MRI was obtained with select images available for review in Figure 2. The MRI reveals the rotator cuff to be intact without significant humeral head superior migration or eccentric wear. Again, mild to moderate glenohumeral arthritis was present on the MRI with additional subchondral cysts noted. The subchondral cysts are present on the glenoid side specifically posteriorly demonstrating a more posteriorly oriented wear pattern. There is also evidence of substantial cartilage loss on both the humeral and glenoid sides of the joint. The patient was also noted to have acromioclavicular joint edema and degenerative changes upon review of the MRI.

Dr. Bigliani receives research royalties from Zimmer through Columbia University and does have stock options from OrthoNet.

*Address reprint requests to Louis U. Bigliani, MD, Department of Orthopaedic Surgery, Center for Shoulder, Elbow, and Sports Medicine, Columbia University, 622 W 16th St, PH-11 Center, New York, NY.

E-mail address: lub1@columbia.edu (L.U. Bigliani).

http://dx.doi.org/10.1053/j.sart.2014.02.010
1045-4527

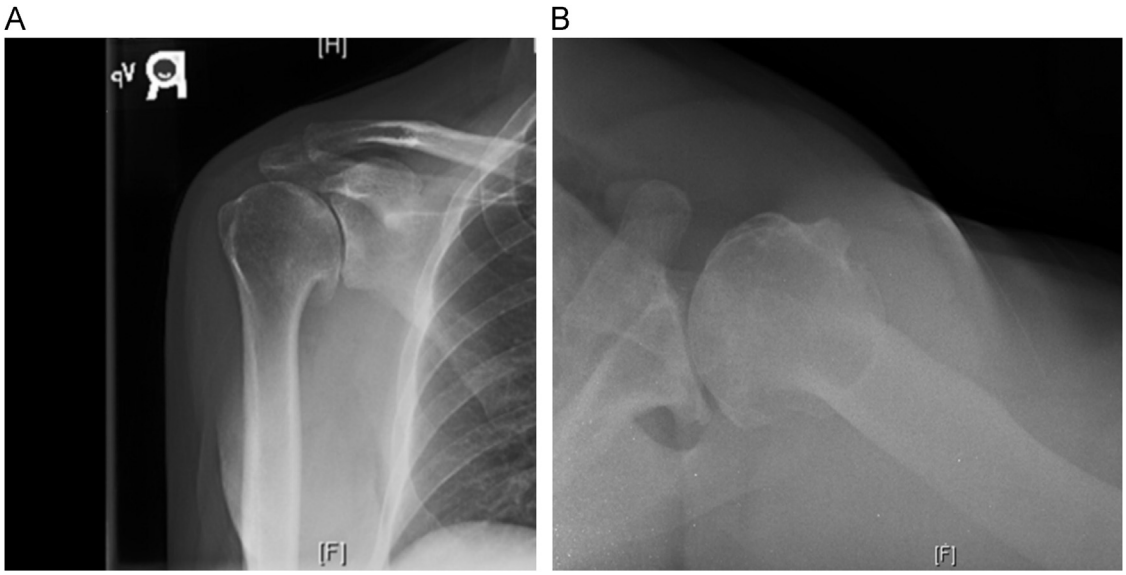


Figure 1 – (A and B) Standard AP and axillary views of the right shoulder of a healthy, active 71-year-old male.

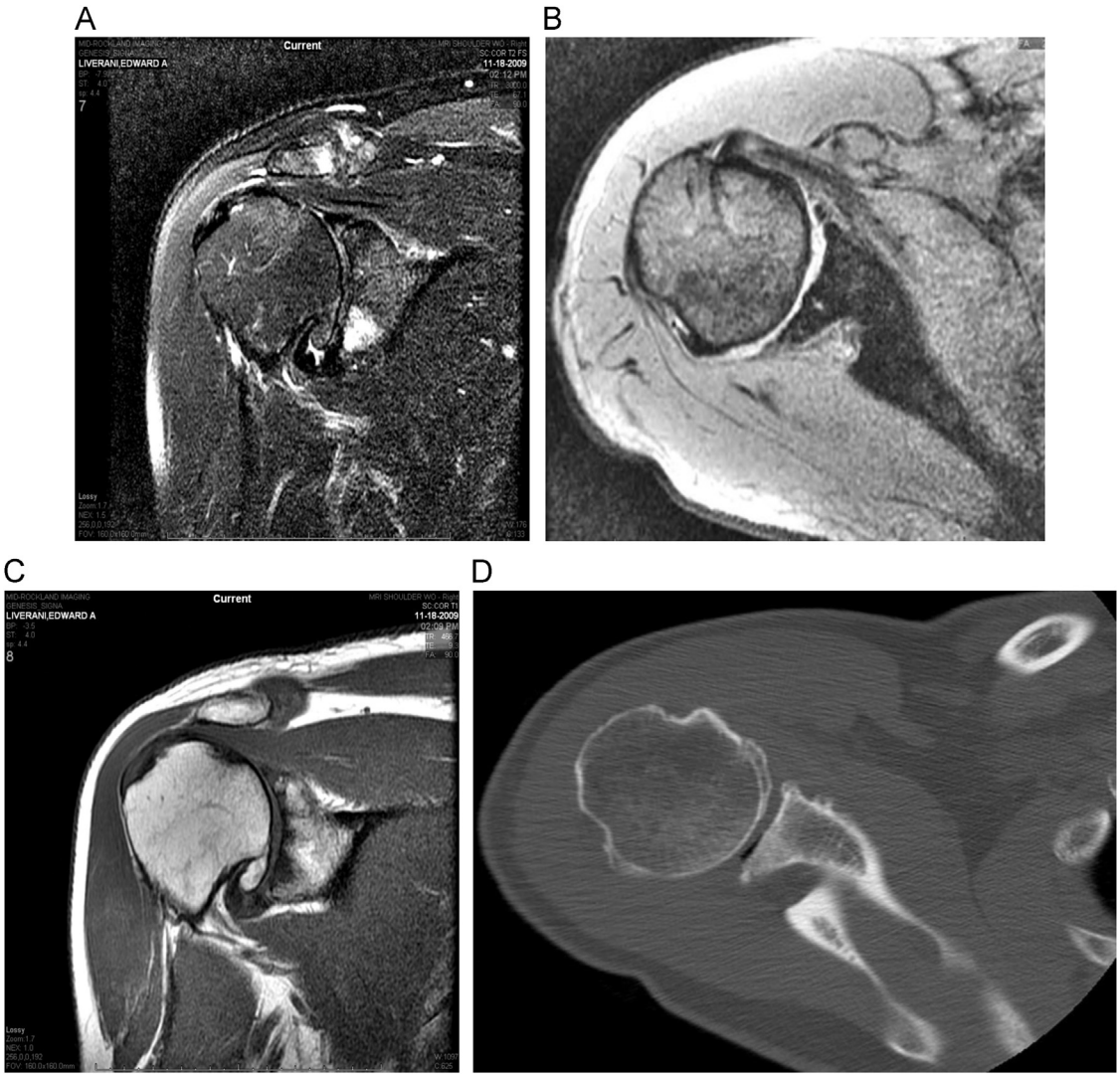


Figure 2 – MRI and CT of a healthy 71-year-old patient with significant osteoarthritis of the glenohumeral joint. The patient is also noted to have his rotator cuff intact without superior head migration demonstrating no rotator cuff tear arthropathy.