CORR Insights®: Is Premorbid Glenoid Anatomy Altered in Patients with Glenohumeral Osteoarthritis?

T. Bradley Edwards MD

Received: 21 May 2013 / Accepted: 24 May 2013 / Published online: 4 June 2013
© The Association of Bone and Joint Surgeons® 2013

Where Are We Now?

This study makes some interesting points regarding acquired glenoid bone loss in glenohumeral osteoarthritis, and yields valuable insight into the treatment of patients with these conditions. First, it appears that premorbid glenoid version and inclination of osteoarthritic shoulders is not appreciably different than nonpathological shoulders. This suggests that in patients with unilateral disease, the contralateral glenoid version may be used as a “goal for correction” during shoulder arthroplasty. Second, this study further validates the authors’ glenoid vault model as

a technique for determining premorbid glenoid version and inclination. One issue not addressed by the authors was subluxation index in these subjects. Walch et al. [1] proposed that static posterior subluxation of the humeral head may be the first stage of glenohumeral osteoarthritis in patients who eventually develop posterior glenoid bone loss. It is important to note that patients in the Ricchetti study upon which I am commenting here have acquired glenoid bone loss (Walch Type B2 glenoid), an entity distinguishable from congenital glenoid bone loss (Walch Type C; glenoid dysplasia); hence extrapolation of information in this study should not be applied to the latter glenoid type.

Where Do We Need to Go?

This study makes an assumption that patients with posterior glenoid bone loss and subsequent increased glenoid retroversion undergoing shoulder arthroplasty should have their glenoid version corrected to “normal.” It is unclear whether correction of excessive retroversion will yield better results compared to patients that have not had version corrected to normal. Additionally, the role of static posterior subluxation of the humeral head contributing to posterior glenoid bone loss needs to be further elucidated.

How Do We Get There?

Studies are needed that correlate correction of pathological glenoid version at the time of shoulder arthroplasty with clinical and radiographic outcomes. Techniques used in

This CORR Insights® is a commentary on the article “Is Premorbid Glenoid Anatomy Altered in Patients with Glenohumeral Osteoarthritis?” by Ricchetti and colleagues available at: DOI: [10.1007/s11999-013-3069-5](https://doi.org/10.1007/s11999-013-3069-5).

The author certifies that he, or a member of his immediate family, has no funding or commercial associations (eg, consultancies, stock ownership, equity interest, patent/licensing arrangements, etc) that might pose a conflict of interest in connection with the submitted article.

All ICMJE Conflict of Interest Forms for authors and *Clinical Orthopaedics and Related Research*® editors and board members are on file with the publication and can be viewed on request.

The opinions expressed are those of the writers, and do not reflect the opinion or policy of *CORR*® or the Association of Bone and Joint Surgeons®.

This CORR Insights® comment refers to the article available at DOI: [10.1007/s11999-013-3069-5](https://doi.org/10.1007/s11999-013-3069-5).

T. B. Edwards (✉)
Fondren Orthopaedic Group, 7401 South Main Street, Houston,
TX 77030-4509, USA
e-mail: bemd@fondren.com

this study should be applicable to measuring postoperative glenoid version strengthening the clinical applicability of this study. Finally, the authors could easily assess the subluxation index in these patients, further strengthening our knowledge base on the etiology of glenohumeral arthritis and glenoid bone loss.

Reference

1. Walch G, Ascani C, Boulahia A, Nové-Josserand L, Edwards TB. Static posterior subluxation of the humeral head: an unrecognized entity responsible for glenohumeral arthritis in the young adult. *J Shoulder Elbow Surg.* 2002;11:309–314.