



## CORR Insights

**CORR Insights®: Can the Ream and Run Procedure Improve Glenohumeral Relationships and Function for Shoulders With the Arthritic Triad?**

T. Bradley Edwards MD

**Where Are We Now?**

Patients with osteoarthritis and a biconcave glenoid, part of the arthritic triad, continue to represent a challenge to the shoulder

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arthroplasty surgeon. In recent years, the most commonly employed surgical option has involved correcting the glenoid version and biconcavity through eccentric reaming and placement of a polyethylene glenoid component [5]. Results of this technique, while good, have not been perfect. Recurrence of posterior subluxation of the humeral head coupled with glenoid component loosening has led some authors to recommend the use of posteriorly augmented anatomic glenoid components and even reverse shoulder arthroplasty to address these cases [3, 4]. Authors have previously employed hemiarthroplasty in these cases to avoid glenoid component failure. Unfortunately, hemiarthroplasty in this difficult subset of patients has yielded disappointing results [2].

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

Matsen and colleagues introduced the “ream and run” technique, which seemingly represents a hybrid of anatomic total shoulder arthroplasty and hemiarthroplasty. This technique attempts to restore a single concavity to the glenoid while avoiding placement of a glenoid component, hence eliminating the risk of glenoid component failure. Results of the ream and run technique have been previously reported in a larger patient population [1]. This report is the first to detail the outcomes of this technique in the arthritic triad population.

**Where Do We Need To Go?**

The ream and run technique seemingly adds a new weapon in the shoulder surgeon’s armamentarium in the treatment of the arthritic triad. Much more information is needed on the mid- and long-term outcomes of the ream and run technique and other approaches being used to treat these patients. The implications of glenoid

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bone removal to correct glenoid biconcavity need to be closely evaluated at longer followup. Although the authors state that minimal bone is removed, negative consequences of subchondral bone removal have been reported with the use of total shoulder arthroplasty [6]. Certainly, biconcave deformity of increasing severity will necessitate increased bone removal to restore a uniconcave glenoid surface. One wonders if removal of this subchondral bone combined with a metallic humeral head component will lead to progressive humeral head medialization and glenoid bone loss that could increase the complexity of future revision surgery. Only time will tell if these theoretical concerns are justified.

## How Do We Get There?

Better followup studies are needed to assess the treatment options for the arthritic triad. I would encourage

Matsen and colleagues to continue to follow this subset of patients into the mid- and long-term both clinically and radiographically. Additionally, higher level-of-evidence studies could compare the ream and run technique prospectively to other available surgical options including anatomic total shoulder arthroplasty with a conventional glenoid component, anatomic total shoulder arthroplasty with a posteriorly augmented glenoid component, and reverse shoulder arthroplasty.

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