Fixation of humerus fractures in RA

Introduction:
Currently, there is no information in the literature on operative treatment of proximal humeral fractures in patients with rheumatoid arthritis. The purpose of this study was to determine the results, risk factors for an unsatisfactory outcome, and rates of failure in this patient population.

Patients / Methods:
Eleven patients with rheumatoid arthritis underwent operative fixation of the proximal humerus from December 1987 to December 2002. Nine patients were treated for acute fractures, and two patients were treated for nonunion after primary nonoperative treatment. The medical records of patients were reviewed and patients were assessed clinically and by questionnaire to assess pain, satisfaction, range of motion, radiographic outcomes, and occurrence of complications.

Results:
All patients with acute fractures achieved union of their fractures. However, four patients had loss of reduction, three due to hardware cutout or backout, with two of these going on to significant malunion. Two patients treated for symptomatic pseudarthrosis after nonoperative care with internal fixation and bone graft both had complications (one requiring hemiarthroplasty after painful nonunion, and one with chondrolysis). At the most recent follow-up, mean active elevation was 95 degrees and mean external rotation was 40 degrees. Overall, one patient had an excellent result, four patients had satisfactory result, and six patients had an unsatisfactory outcome based on the Neer grading system. At the most recent follow-up, mean active elevation was 95 degrees and mean external rotation was 40 degrees.

Conclusion:
Achieving stable reduction and functional results in operatively treated fractures of the proximal humerus in patients with rheumatoid arthritis is more difficult than in similar patient age groups due to poor bone quality and pre-existing shoulder abnormalities. Patients and treating physicians should be aware of the potential complications of operative treatment in this complex patient population.