

ABSTRACT

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Purpose - 1) to describe patients with rheumatoid arthritis (RA) treated with shoulder replacement in regards to patient-reported outcome, prosthesis survival and causes of revision, and 2) to compare outcome after Resurfacing Hemi Arthroplasty,(RHA) and Stemmed Hemi Arthroplasty (SHA).

Patients and methods - Data was obtained from the national Danish Shoulder Arthroplasty Registry. We included patients with RA receiving shoulder arthroplasty in Denmark between 2006 and 2010. Patient-reported outcome was obtained one year postoperatively using the Western Ontario Osteoarthritis of the Shoulder Index (WOOS), and rates of revision were calculated by checking revisions reported until December 2011. The patient-reported outcome of RHA was compared to SHA using regression analyses with adjustment for age, sex and previous surgery.

Results - During the study period, 167 patients received shoulder arthroplasty because of rheumatoid arthritis, of which 80 (48%) received RHA, and 34 (26%) received SHA. 16 patients were treated with Total stemmed Shoulder Arthroplasty (TSA), and 24 with Reverse Shoulder arthroplasty (rTSA). 130 patients returned a complete questionnaire reporting a total mean WOOS of 63. The cumulative 5 year revision rate was 7%, revisions occurring primarily in the group treated with resurfacing hemi arthroplasty which alone holds a revision rate of 14%. There was no statistically significance in WOOS between RHA and SHA (mean difference 3,0, SD 5,3, $p = 0,57$).

Interpretation – This study shows that shoulder arthroplasty, regardless of design, is a good option in terms of pain-relief and improvement in shoulder function in RA patients. The high revision rate that exists in the RHA group suggests that other designs may offer better implant survival. However, this needs to be confirmed in larger studies.