Patient-reported outcome following revision of resurfacing hemiarthroplasty in patients with glenohumeral osteoarthritis.111 revisions reported to the Danish Shoulder Arthroplasty Registry.

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Abstract

Introduction: Resurfacing hemiarthroplasty (RHA) has a bone preserving design. Thus, it has been recommended as the preferred treatment in patient with a long expected lifetime and subsequently need of revision surgery. Nonetheless, this argument is only valid if it is possible to revise with an acceptable outcome. The aim of this study was to report the patient-reported outcome following revision of RHA and to compare the results to that of the primary procedures.

Materials and Methods We included patients reported to the Danish Shoulder arthroplasty registry between 2006 and 2013. 2,452 patients were replaced because of osteoarthritis and 1,292 were treated with RHA. 111 RHA had been revised by the end of 2013 and were eligible. Western Ontario Osteoarthritis of the Shoulder index (WOOS) was used to evaluate outcome at 1 year.

Results Mean age was 65 years (SD 11), 50 % were female. Mean WOOS was 60 (SD 27). This was slightly inferior to that of primary RHA which had a mean WOOS 68, P<0.01; however, the difference did not exceed the minimal clinically important difference. The RHA were revised to stemmed hemiarthroplasty (SHA) (n=50), total shoulder arthroplasty (TSA) (n=57) or reverse shoulder arthroplasty (RSA) (n=40). Mean WOOS for the 3 groups were 50, 63 and 67 respectively.

The results of secondary SHA and especially TSA were inferior to that of the primary procedures which had a mean WOOS of 67 and 80 respectively. The differences were statistically significant, $P<0.01$ and they exceeded the minimal clinically important different. The results of secondary RSA were similar to that of the primary procedures (mean WOOS 69).

Interpretation

The results of revised RHA can be regarded as acceptable, but the outcome of especially secondary TSA is inferior to that of primary TSA. RHA may be preferred in some special cases, but TSA is currently our preferred treatment also in patients with a long expected lifetime.