

# A Comparison of Complications of Total Wrist Fusion and Silastic Arthroplasty

Geriatric Orthopaedic Surgery  
& Rehabilitation  
2014, Vol. 5(4) 213  
© The Author(s) 2014  
Reprints and permission:  
sagepub.com/journalsPermissions.nav  
DOI: 10.1177/2151458514543003  
gos.sagepub.com



S. Hassan<sup>1</sup>, C. Carpenter<sup>1</sup>, P. Estridge<sup>1</sup>, A. Malhas<sup>1</sup>,  
and C. Wigderowitz<sup>1</sup>

## Keywords

basic research, adult reconstructive surgery, geriatric medicine, physical, medicine and rehabilitation, upper extremity surgery

The use of the Swanson silastic arthroplasty for the treatment of the rheumatoid hand has been shown to correct deformities and improve function. Silastic arthroplasty has a tendency to fracture requiring revision, while wrist fusion is thought to be a more durable solution. We conducted a retrospective case note analysis of all patients undergoing wrist arthroplasty or wrist fusion for clinical follow-up. Radiographic imaging was reviewed. Patient records on the combined GP/Hospital database were reviewed for the purpose of community follow-up.

In the cohort of patients who underwent silastic arthroplasty, the indications for surgery were 14 rheumatoid arthritis, 2 psoriatic arthritis, 2 juvenile arthritis, and 3 osteoarthritis. Of the 21 patients, 17 were older than 65 years of age. There were 3 reported complications: a postoperative wound infection that required debridement, a complex regional pain syndrome, and an ongoing symptoms of pain requiring debridement of the distal radius. There were no implant fractures at last radiographic review. The 5-year survivorship was 100% with reoperation as the end point with 2 implants lasting up to 15 years.

A total of 38 patients underwent a wrist fusion, with a mean age of 52 years, with 6 patients older than 65 years of age. In all, 17 were undertaken for osteoarthritis, with 1 case of avascular necrosis of the capitate in a patient with calcinosis, Raynaud phenomenon, esophageal dysmotility, sclerodactyly, and telangiectasia (CREST) syndrome. Eleven patients reported time off work as a direct result of their symptoms. Postoperative complications include hematoma, complex regional pain syndrome, distal radial ulnar joint pain requiring Darrach procedure in 4 patients, screw revision following prominence, and 4 cases where the metal ware was removed. All fusions went onto unite. Survivorship at 5 years was 91% with reoperation as the end point.

This small case series shows that for this highly selected group of patients with an inflammatory arthropathy, silastic arthroplasty remains a viable option. For elderly patients having rheumatoid with low demand, this treatment has a lower reoperative rate at 5 years and therefore may often be the final treatment they require.

<sup>1</sup> Department of Orthopaedic and Trauma Surgery, Ninewells Hospital and Medical School, Dundee, United Kingdom

## Corresponding Author:

S. Hassan, Department of Orthopaedic Surgery, Ninewells Hospital and Medical School, Dundee, DDI 9SY, United Kingdom.  
Email: s.hassan@nhs.net