Orthopaedic surgery in patients with rheumatoid arthritis: a shift towards more frequent and earlier non-joint-sacrificing surgery

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Medical treatment of rheumatoid arthritis (RA) aims at controlling synovitis and arresting erosive disease. Orthopaedic surgery deals with joint destruction, reflecting the severity of damage, but also deals with local persistent synovitis and tenosynovitis. Along with altering medical treatment strategies, rheumatologists and surgeons feel they have changed the type and timing of surgery in recent years. We performed a cross sectional study on the use of orthopaedic surgery in RA, to provide data on types of procedures and evolution of timing and type of surgery.

A cross sectional study (January to April 2004) was carried out in two university and three non-university outpatient clinics. Consecutive outpatients with RA¹ (n = 285) were considered, except for one centre that included patients attending the day care centre for treatment with infliximab (n = 20). An examiner questionnaire assessed disease characteristics and medical and surgical treatment specific for RA. *Joint-sacrificing procedures* refer to surgery where the joint cartilage is either replaced or resected with or without subsequent joint fusion and *non-joint-sacrificing surgery* refers to all articular or periarticular procedures that do not result in the resection or replacement of the cartilage.

Time to surgery was assessed by Kaplan-Meier analysis. Patients were dichotomised in two cohorts according to the year of diagnosis (before or after 1990) because a clear change was seen from this year onward. Cox proportional hazard analysis explored the influence of belonging to one of the cohorts on each type of surgery multivariate.

The mean (SD) age of the 285 patients (70% university) was 57 (12) years and the mean disease duration 9.7 years. Two hundred and fifty four (89%) patients currently used one or more disease modifying antirheumatic drug, including a biological agent in 37%. Seventy one patients belonged to the early and 214 to the late cohort.

One hundred and six (37%) patients underwent 274 procedures. Sixty seven (24%) reported multiple interventions. Median disease duration at the first operation was 7 years (mean (SD) 8.0 (6.9) years). Table 1 provides an overview of the frequencies and timing of all types of surgical procedures. A more detailed table is available online in Appendix 1, available at <http://www.annrheumdis.com/supplemental>.

Figures 1A and B show that patients in the recent cohort were 1.79 times (95% confidence interval 1.10 to 2.93) more likely to have earlier joint surgery than those in the later joint surgery cohort, specifically earlier non-joint-sacrificing procedures (hazard ratio 6.35 (95% confidence interval 2.31 to 16.95)).

In a cross sectional group of patients with RA treated by a rheumatologists, 28% had undergone joint-sacrificing and 19% non-joint-sacrificing orthopaedic procedures. Of those having surgery, 63% had multiple procedures. Remarkably, there was a shift towards earlier non-joint-sacrificing surgery in the group diagnosed after 1990.

Compared with reported values, the prevalence of procedures showed similar trends.^{2–8} However, in a population of patients with RA sampled in Canada a decline in orthopaedic surgery among the later cohorts was reported.⁶ A survey from Sweden confirmed a decrease in admissions of at least one night for lower limb surgical procedures between 1987 and 2001.⁹

During the past 15 years, increasing expectations from patients and healthcare providers have focused on tighter disease control and optimal functioning. Accordingly, the increase in non-joint-sacrificing surgery (synovectomy) points to the role of surgery in controlling local inflammation. If our results can be confirmed in other regions, it will be important to assess the long term effectiveness of early non-joint-sacrificing surgery as an adjuvant to medical treatment.

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Table 1 Frequency of the different types of RA related surgical procedures and timing after diagnosis in a sample of 285 patients with RA

Procedure	No (%) of procedures (n = 274)	No (%) of patients (n = 285)	Disease duration at surgery (years) Mean (SD) {median, IQR*}
<i>Joint-sacrificing surgery</i>			
Arthroplasty (prostheses)	193 (70.4)	81 (28.4)	11.16 (6.33) {11, 7–15}
Arthroplasty revision surgery	64 (23.4)	42 (14.7)	10.49 (6.06) {9, 6–14}
Resection arthroplasty	9 (3.3)	5 (1.8)	19.33 (3.88) {19, 17–21}
Arthrodesis	55 (20.1)	29 (10.2)	11.65 (7.17) {11, 8–15}
	65 (23.7)	39 (13.7)	10.60 (5.46) {11, 7–15}
<i>Non-sacrificing-joint surgery</i>			
Synovectomy	81 (29.6)	55 (19.3)	8.08 (8.89) {4.5, 2–11}
Releases and repairs	53 (19.3)	38 (13.3)	7.83 (8.88) {4, 2–11}
Resection of nodules	18 (6.6)	16 (5.6)	9.06 (10.91) {4.5, 2–14}
Wound surgery	7 (2.6)	6 (2.1)	6.43 (2.64) {7, 6–8}
Classic hallux valgus (Chevron osteotomy)	1 (0.4)	1 (0.4)	21
Lesser ray shortening (Weil osteotomy)	1 (0.4)	1 (0.4)	2
	1 (0.4)	1 (0.4)	9

IQR, interquartile range.

Figure 1 Time to (A) first joint-sacrificing procedure and (B) first non-joint-sacrificing procedure for patients diagnosed before, compared with those diagnosed after, 1990.

A more detailed version of table 1 is available online at <http://www.annrheumdis.com/supplemental>

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Statin therapy might be beneficial for patients with ankylosing spondylitis

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Therapeutic options for patients with the chronic inflammatory disease ankylosing spondylitis (AS) are limited. Treatment was, until recently, mainly based on non-steroidal anti-inflammatory drugs and physical therapy. The efficacy of disease modifying antirheumatic drugs, such as sulfasalazine and methotrexate, is less beneficial in AS than in other rheumatic diseases such as rheumatoid arthritis.¹ Recently, tumour necrosis factor α blocking agents, have been proved to be very effective in a high proportion of patients with AS. However, these agents are expensive and their use is sometimes accompanied by severe adverse events, as opportunistic infections. Moreover, tumour necrosis factor α

blocking agents are not effective in about 30% of patients.² Hence, there is a continuing need for alternative therapeutic options.

There is growing evidence that statins possess anti-inflammatory properties, as indicated by lowering of C reactive protein (CRP) levels, and recently, the clinically beneficial effect of the statin atorvastatin on disease activity was demonstrated in rheumatoid arthritis.^{3,4} Therefore, we conducted an open pilot study to investigate the effect of rosuvastatin on disease activity in patients with AS.

Fifteen unselected consecutive outpatients with AS, according to the modified New York criteria, were treated