

# The presence of forefoot problems and the role of surgery in patients with rheumatoid arthritis

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Foot problems constitute a major problem in up to 90% of patients with rheumatoid arthritis, causing pain and functional limitations.<sup>1,2</sup> Forefoot deformities are often complicated by ulcers, which can infect the foot and result in major septic complications. Although no data are available on the effect of foot problems on function and quality of life in patients with rheumatoid arthritis, in patients with diabetes mellitus these scores drop substantially.<sup>3</sup>

Foot problems can be treated by the use of orthotic devices and custom-made shoes, or by a variety of surgical techniques.<sup>1,4</sup> We conducted a cross-sectional, multicentre study to assess the burden of forefoot problems and current management in 285 consecutive patients with rheumatoid arthritis in five university and non-university centres between January and April 2004. The mean age of patients was 57 years (SD 12.6), the mean disease duration was 9.7 years (SD 7.9) and the mean score of health assessment questionnaire<sup>5</sup> was 1.17 (SD 0.79). In all, 89% of the patients were on disease-modifying antirheumatic drugs.

A history or presence of any foot ulcer, the use of orthotic devices, custom-made shoes and foot surgery were noted. Patients were also evaluated by the American Orthopaedic Foot and Ankle Society for Metatarsophalangeal Joint I-Forefoot Score.<sup>6</sup> Correlations were analysed using Spearman's rank analysis or  $\chi^2$  test.

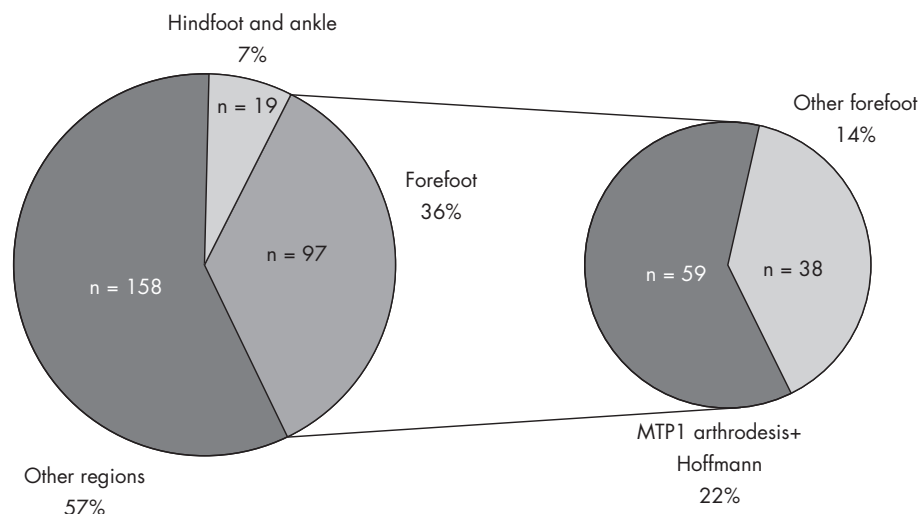
The results of the American Orthopaedic Foot and Ankle Society analysis showed an overall mean of 70.1 (SD 18.4), which correlated significantly with the scores of health assessment questionnaire ( $R = -0.40$ ,  $p < 0.001$ ) and disease duration ( $R = -0.21$ ,  $p = 0.003$ ). Forefoot pain was debilitating in 6% of patients, marked in 28%, mild in 47% and absent in 19%.

**Table 1** Types of foot and ankle procedures carried out because of rheumatoid arthritis

Joint non-sacrificing foot procedures <sup>7</sup> (16/81 procedures)	Joint sacrificing foot procedures <sup>7</sup> (100/193 procedures)
Release or repair (n=8) Achilles tendon (n=2) Posterior tibial tendon (n=6)	Arthroplasty (n=5) Ankle (n=4) MTP1 (n=1)
Resection of nodules (n=5) Foot (n=5)	Resection arthroplasty (n=39) Lesser toes (Hoffmann) (n=32) Keller-Lelievre (n=5) Keller of the fifth ray (n=2)
Wound surgery (n=1) "Classic" hallux valgus correction (n=1)	Arthrodesis (n=56) MTP1 (n=27) PIP of the lesser toes (n=20) IP of the Hallux (n=2) Hindfoot (triple arthrodesis) (n=7)
Lesser ray shortening (n=1)	

IP, interphalangeal joint; MTP, metatarsophalangeal joint; PIP, proximal interphalangeal joint.

In all, 13% of the patients had presented in the course of disease with foot wounds, with 5% having an active ulcer at the time of the survey; 4% of the patients had had multiple wound problems. Also, 42% of the patients reported wearing insoles; 12% had worn insoles but had discontinued their use, and 25% of patients were wearing custom-made shoes. Fourteen patients had already used either insoles (n=7) or custom-made shoes (n=7) when an ulcer occurred, and in four patients this event led to additional modifications. Only six patients did not have footwear modification before or after the occurrence of an ulcer. Table 1 shows an overview of



**Figure 1** Share of foot and ankle procedures carried out, compared with those carried out in other anatomical regions. MTP, metatarsophalangeal.

foot and ankle procedures carried out. The share of foot and ankle procedures carried out is shown in fig 1.

In all, 48 patients had a total of 97 forefoot procedures; 12 patients had a total of 19 hindfoot and ankle procedures (7 had undergone both forefoot and hindfoot procedures). Only five patients were dissatisfied with the results. A trend towards earlier foot surgery was seen in patients diagnosed in 1990 or later. Of the cohort diagnosed before 1990 (n = 71), only one patient was operated on the foot or ankle region in the first 5 years of disease, whereas in the cohort diagnosed thereafter, and having a disease duration of at least 5 years (n = 128), 12 patients were operated.

The burden of foot problems in rheumatoid arthritis is impressive and deserves the attention of the treating doctors. The use of the Disease Assessment Score 28 in clinical practice, although increasing the effectiveness of medical treatment,<sup>8,9</sup> should be accompanied by a specific foot and ankle examination. The occurrence of foot wounds frequently forms the starting point of a cascade of orthotic and surgical treatment strategies, and deserves attention in an era of biological treatments. Surgical treatment has changed over the past 10–15 years,<sup>7</sup> with some groups reporting less surgery.<sup>10</sup> Our study suggests a trend to earlier intervention in foot and ankle surgery, possibly owing to the changing expectation levels of patients and doctors. In foot and ankle surgery, joint sacrificing procedures still form the mainstay of treatment.

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## Efficacy of B cell depletion in patients with rheumatoid arthritis refractory to anti-tumour necrosis factor $\alpha$ agents: an open-label observational study

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About 30% of patients with rheumatoid arthritis fail to achieve a marked clinical response to tumour necrosis factor (TNF) $\alpha$  inhibitors.<sup>1</sup> Rituximab, a chimeric monoclonal antibody, selectively depletes human CD20-positive B cells.<sup>2</sup> In patients with rheumatoid arthritis with incomplete response to methotrexate (MTX), response with the addition of rituximab was superior to that with MTX alone.<sup>3</sup> We carried out an observational study to assess the efficacy and safety of selective B cell depletion in the management of patients with rheumatoid arthritis refractory to TNF $\alpha$  inhibitors.

Ten patients fulfilling the 1987 American College of Rheumatology diagnostic criteria for rheumatoid arthritis<sup>4</sup> and refractory to at least one anti-TNF agent for  $\geq 3$  months were prospectively enrolled. Table 1 presents their clinical

characteristics at baseline. All of them had active disease (median Disease Activity Score (DAS28) 5.28, interquartile range (IQR): 4.6–6.3).<sup>5</sup>

Patients received two intravenous perfusions of 1000 mg rituximab at 2-week intervals, as previously described.<sup>3</sup> They received transient oral or intravenous corticosteroids in association with each rituximab infusion. They were treated with MTX before inclusion, and MTX (10–25 mg weekly) on stable dosage was the only disease-modifying antirheumatic drug maintained during the study.

At 3 months, 8 of 10 patients had a good or moderate DAS28 response (median DAS28 reduction 1.94, IQR: 1.18–2.53) and three were in remission.<sup>6,7</sup> At 6 months, this response was maintained in seven of eight patients and a