

## EDITORIAL

# Declining needs for total joint replacements for rheumatoid arthritis

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See related research by Hekmat *et al.*, <http://arthritis-research.com/content/13/2/R67>

### Abstract

This millennium brings new views to rheumatology. Total joint replacement surgery is needed less often as active treatment strategies combined with availability of new medications has led to more effective rheumatoid arthritis control. This was beautifully shown in a recent issue of *Arthritis Research & Therapy* by a Swedish study that uses data from national registers and compares incidence rates for total hip and knee arthroplasties before and after the establishment of biologic agents use for rheumatoid arthritis

Total joint replacement (TJR) surgery was a milestone in rheumatology. Patients whose inflammatory joint disease once confined them to a wheelchair or bed received a new joint and were able to walk. But 50 years later, approaches have changed. A current trend, as reported by Hekmat and colleagues [1] in a recent issue of *Arthritis Research & Therapy*, is to gather evidence that TJR is not needed for patients with rheumatoid arthritis (RA) as inflammation and consequent damage can be kept under control with improved medications.

A need for a TJR of the hip or knee has been a severe long-term consequence for patients with RA. Wolfe and Zwillich [2] estimated that 25% of all RA patients who were under observation between the 1970s and 1990s needed TJR surgery over two decades.

Concomitantly with an increasing use of early and active treatment strategies, the clinical status of patients with RA has improved in comparison with previous decades. Even before the era of biologic treatments, improvements were seen in patients' clinical status as measured by disease activity, functional capacity, radiographic scores, and other clinical parameters [3].

Furthermore, lower mortality rates were reported in patients who responded to methotrexate and lower work disability rates were noted in patients who responded to anti-rheumatic drugs [4].

Although improvements were seen in clinical outcomes, it was a long time before studies showed changes in the rates of TJR. Only in the last 10 years have studies from Western countries and Japan suggested that rates of TJR and other RA-related surgeries have been stable or decreased in patients with RA [5-13], as now reported also by Hekmat and colleagues [1]. Declining trends of TJR surgeries in patients with RA contrasts with a remarkable phenomenon of the increase in overall rates of TJR surgery of the knee or hip documented in the general population of many countries having doubled since 1990, and increased threefold since the early 1980s [5,14,15].

Hekmat and colleagues [1] identified prevalent cases with RA in 1997 and incident cases from 1997 to 2007 in a community-based register in Malmö, Sweden, and linked them to the Swedish hip and knee arthroplasty registers. The incidence of a primary TJR of the hip or knee in 1998-2001 (before tumor necrosis factor inhibitors were available for the treatment of RA) was compared with that in 2002-2006/07 (after these inhibitors became available). A decline was seen in the incidence of the primary hip TJR from 12.6 to 6.6 per 1,000 person-years, whereas a slight trend toward an increase of primary TJR of the knee was observed.

What does this study teach us? First, this study provides further evidence of improving outcomes of RA. TJR of the hip or knee is a severe long-term outcome for patients with RA and accounts for a substantial component of the costs of this disease [16]. Overall rates of TJR surgery of the hip or knee in general population have been documented to have been doubled since 1990 and increased threefold since the early 1980s in many countries. These findings indicate an increased need, associated with aging of the population, for TJR surgery in the population and apparently availability of greater resources to perform these procedures. Therefore, if patients with RA would need TJR surgeries, resources

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would be available in many countries. Second, this study, like many other Swedish and Scandinavian studies [17], is an excellent example of the value of national registers and their use in epidemiological research. The observations by Hekmat and colleagues [1] emphasize the benefits of active treatment strategies for patients with RA. Advances in RA would allow future availability of resources for TJR surgery for the increasing number of people with osteoarthritis in aging populations. Finally, Hekmat and colleagues [1] report promising observations from a developed country with a long history of national registers and availability of biologic treatments for RA. We must recognize that many societies are not as fortunate. Worldwide, many patients with RA, perhaps the majority of them, still suffer from severe RA [18], and measures are needed to improve outcomes of all patients with RA in all countries.

#### Abbreviations

RA, rheumatoid arthritis; TJR, total joint replacement.

#### Competing interests

The authors declare that they have no competing interests.

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