Do we need Early Arthritis Clinics to counteract the excess of mortality in rheumatoid arthritis?

Sirs,

The organisational model of the Early Arthritis Clinic (EAC) has spread in many settings, supported by the evidence on the efficacy of a timely and tailored management of rheumatoid arthritis (RA) to improve disease-specific outcomes. Despite a theoretical advantage, however, the impact of such institutions on hard outcomes has yet to be fully explored (1). In fact, patients with RA face an increased mortality compared to the general population, and despite the improvement in managing the disease, many reports underline that this gap is far from being filled (2).

Here we would like to share an analysis based on the EAC of the IRCCS Policlinico San Matteo Foundation of Pavia, in the Lombardy region of Italy. Our purpose was to define whether a dedicated pathway for early diagnosis and intensive treatment of inflammatory arthritis would reflect in no increased mortality compared to the general population, taking comorbidities into account. Patients with RA (1987 or 2010 criteria) or undifferentiated arthritis (UA) with less than 12 months of symptom duration were followed according to a tight-control regimen to achieve low disease activity (ELECTRA cohort) (3). The administrative healthcare database (AHD) of the Pavia area was used to obtain information on the mortality of these subjects from 2005 to the end of 2016. In the period from 2004 to 2013, information from the AHD of the Lombardy region of unaffected subjects, composing the control group of the Record Linkage of Rheumatic Disease study of the Italian society for Rheumatology, was also available (RECORD cohort) (4). This group included subjects paired for age and gender to the patients with RA of the Lombardy region.

For both cohorts, AHDs provided information on mortality and comorbidities, to build the Charlson Comorbidity Index (CCI). Survival was assessed through survival curves, crude and adjusted for age, gender and the CCI.

The ELECTRA cohort included 857 patients, of which 534 (62.3%) had RA and 73% were female, with a mean (standard deviation, SD) age of 58 (15) years and a median (interquartile range, IQR) CCI of 1 (1–1). The RECORD cohort included 280,244 subjects, of which 70.6% were female, with a mean (SD) age of 60 (14.6) years and a median CCI (IQR) of 0 (0–0). After a median follow-up of 10.3 years, there were 77 (9%) deaths in the ELECTRA and 42676 (15.2%) in the RECORD cohort.

Survival analysis did not demonstrate significant differences between the two cohorts, and this was confirmed also after the correction for age, gender and CCI (Fig. 1A-B). To explore this finding, we performed an additional analysis including only patients with RA, whose results were consistent with those from the primary analysis (Fig. 1B-C).

Previous reports described a decreasing trend in mortality in early RA treated with intensive strategies, with a mortality comparable to that of the general population of the corresponding country, although comorbidities could not be measured (5, 6). Our analysis confirms this tendency by the direct comparison of a concurrent control group, enrolled from the same setting of the patients, and by using the secure record of the AHD to take for the first time the burden of comorbidities into account. In this way, we specifically assessed the impact of the EAC, in which the intervention includes an early diagnosis and the frequent clinical assessment, following the treat-to-target principle. In a follow-up of 10 years, the survival curves did not show any trend toward an increase of mortality in the ELECTRA cohort. We believe that these findings will support the further implementation of the model of the EAC in clinical practice.

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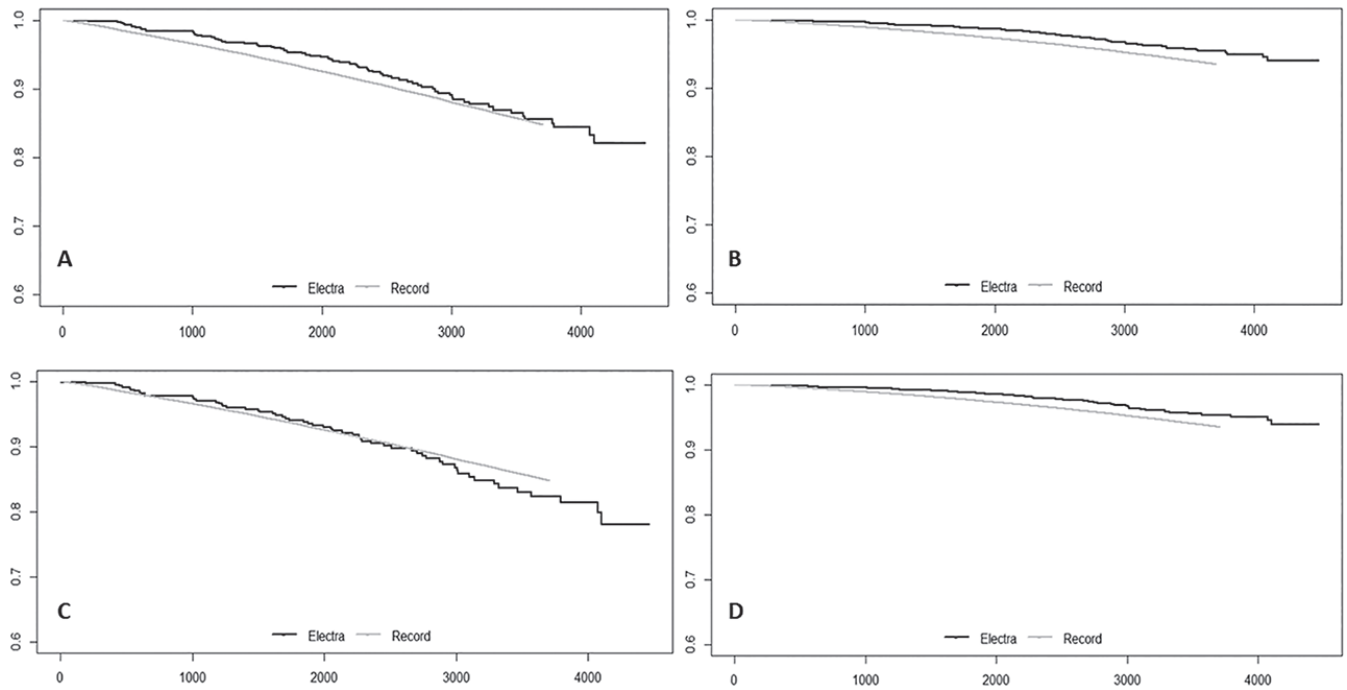

Fig. 1. Survival curves for patients with inflammatory arthritis and controls. Adjustment was made for age, gender and the Charlson Comorbidity Index. Time expressed as days. **A**: overall ELECTRA cohort, crude analysis; **B**: overall ELECTRA cohort, adjusted analysis; **C**: RA patients from the ELECTRA cohort, crude analysis; **D**: RA patients from the ELECTRA cohort, adjusted analysis.

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