

THE CUMULATIVE RATE OF ARTHROPLASTY IN PATIENTS WITH RHEUMATOID ARTHRITIS HAS NOT DECLINED OVER THE LAST THREE DECADES: DATA FROM A PRIVATE RHEUMATOLOGIC CENTER.

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Background: The early implementation of methotrexate and biologic drugs are known to improve prognosis in rheumatoid arthritis (RA) patients. Arthroplasty can be considered as an indirect indicator of lack of tight control.

Objetives: To compare the rate of arthroplasty (regardless of its cause) in patients with diagnosis of RA in three consecutive decades (80's, 90's and first decade of 21st century) and to describe the variables associated with the occurrence of the event "arthroplasty".

Methods: This was a retrospective analysis that included 1258 patients with RA (as per the 1987 ACR criteria) who were diagnosed between January 1980 and December 2009. The relationship between demographic (gender, age at first symptom and at diagnosis), clinical (date of diagnosis, diagnosis delay, tobacco use, presence of rheumatoid factor, sedimentation rate and joint erosions at diagnosis, extra-articular manifestations, time to first arthroplasty, replaced joints, total number of arthroplasties and follow-up time) and therapeutic (number and delay in the use of DMARD's, methotrexate and biologic agents since the diagnosis) domains was examined. The cumulative rate of arthroplasty was estimated using the Kaplan-Meier method and the variables associated with this event analyzed with a Cox regression conditional model. Variables with p value ≤ 0.05 were considered statistically significant.

Results: Patients were predominantly females (81.5%) and they had a mean (SD) age at diagnosis of 45 (14.3) years. The median (IQR) follow-up time was 39 (88) months. We identified 111 (9%) patients who had at least one arthroplasty and a total of 146 arthroplasties (hip= 96, knee= 47, metacarpophalangeal= 2, shoulder= 1). Among patients diagnosed during the 80's (N= 215), 45 (20.9%) had at least one arthroplasty, during the 90's (N= 430), 46 (10.7%) had at least one arthroplasty and during the first decade of this century (N= 613), 20 (3.3%). The cumulative rate of arthroplasty at 5 years was 4%, 3% and 6% in the 3 decades, respectively, and at 10 years it was 13%, 14% y 13% (log rank test= 1.37; $p= 0.50$). In the multivariate analysis, the use of methotrexate (HR= 0.51, CI95% 0.43-0.59; $p < 0.001$) was protective for the event "arthroplasty".

Conclusions: In this study, although the absolute risk of arthroplasty clearly decreases over the last three decades, the cumulative rate does not show the same trend. These disappointing data may not reflect yet the fully implementation of new treatment strategies in this patient population. The utilization of MTX, which is known to be a low cost and effective treatment intervention, was protective for the occurrence of the event arthroplasty.