Delay in consultation and starting disease modifying anti-rheumatic drugs in patients with rheumatoid arthritis. How early arthritis clinics impact on health barriers?

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Background: An early and aggressive treatment has become the cornerstone in the treatment of Rheumatoid Arthritis (RA). For this reason, an early consult with a rheumatologist is crucial. The aim of our study was to evaluate the delay in consultation and starting disease modifying anti-rheumatic drugs (DMARDs) in patients with RA, and to assess the impact of early arthritis clinics and health barriers on such delay. Material and Methods: We carried out a multicenter study including patients with a diagnosis of RA of less than 5 years of disease duration. Data collected included clinical, economic, sociodemographic characteristics, health insurance and health care center (private vs. public hospital; early arthritis clinics vs. routine care hospitals). In addition, we evaluated the presence of health barriers in those patients with <2 years of disease duration, including geographical location, social support, family and work responsibilities, economics issues, accessibility to health care, self-treatment, patientphysician relationship. Three time-points were evaluated: time to first medical contact, time to rheumatologist and time to initiation of first DMARD. The association between variables and time-points were assessed using univariate and multivariate models. **Results:** A total of 316 patients were included; 86% were female, mean age was 47 ± 14 years, disease duration 7  $\pm$  5 years, 73% had low income (less than  $\approx$  1000 dollars/ month), and  $11 \pm 4$  years of formal education. Two third were from public hospitals and one third from private sector, 8% lived alone and 23% were unemployed. The median time to first medical contact was 30 (IQR 10-60) days, being the general practitioner (GP) the initial physician (52%), followed by orthopedist and rheumatologist (24% for both). The total time to see the rheumatologist was 90 (IQR 35-210) days, 32% of the patients delayed more than six months to contact a rheumatologist. Twenty five percent of patients had never been referred by their GPs, duplicating the access time to

rheumatologists [165 (IQR 30-365)] days. The median time to start a DMARD by the rheumatologist was 24 (IQR 6-365) days, which result on a total median time from onset of symptoms of five months. One quarter of patients took longer than 12 months to start a DMARD. Three health barriers were significantly associated with delay in consultation and treatment: geographical location, family and work responsibilities, and lack of economic resources. After adjusting for multiples confounders (health insurance, health care center, marital status, household members, comorbidities and age), the presence of health barriers was independently associated with increased delay to rheumatologist and initiation of a DMARD. In addition, being attended in early arthritis clinics were significantly associated to shorter delay in receiving DMARDs treatment. **Conclusion:** The delay in starting treatment with DMARDs was about 5 months. However, one-quarter of patients took longer than one year to start the treatment. The implementation of early arthritis clinics, a fast referral system and limitation of health barriers are good strategies to optimize the prompt treatment of the patients with RA.