THU0101 IMPACT OF TREATMENTS ON RADIOGRAPHIC PROGRESSION OVER THE FIRST 10 YEARS OF DISEASE IN EARLY RHEUMATOID ARTHRITIS: RESULTS FROM THE ESPOIR COHORT

J. Kedra[1], D. Hajage[2], A. Lafourcade[2], B. Combe[3], M. Dougados[4], B. Fautrel[5]. *[1]Sorbonne Université, Institut Pierre Louis d'Epidémiologie et de Santé Publique (iPLESP), UMR S1136, Paris, France*; *[2]AP-HP, Department of Biostatistics, Pitié-Salpêtrière Hospital, Paris, France*; *[3]Montpellier University, CHU Montpellier, Rheumatology Department, Montpellier, France*; *[4]AP-HP, Rheumatology Department, Cochin Hospital, Paris, France*; *[5]AP-HP, Rheumatology Department, Pitié-Salpêtrière Hospital, Paris, France*

Background: Long-term observational studies on the prediction of structural damage progression (SDP) in rheumatoid arthritis (RA) have mostly considered patients baseline characteristics and have rarely evaluated the specific impact of treatments in real world settings.
Objectives: To assess the impact of treatments exposure on the 10-year radiographic progression in early rheumatoid arthritis (RA).
Methods: The 310 patients of the ESPOIR cohort fulfilling ACR/EULAR 2010 criteria at baseline and having complete radiographic data at baseline and 10 years were considered in the present study. SDP was defined at 10 years as a significant increase of the Sharp/van der Heijde score, i.e., superior to the Smallest Detectable Change of 11.5 at 10 years. Three RA treatments were considered: glucocorticoids (GC), conventional synthetic and biologic Disease-Modifying Anti-Rheumatic Drugs (csDMARDs and bDMARDs), which posologies were standardized by the mean of dose quotients (DoseQ). Drug exposure was modelled with Weighted Cumulative Exposure (WCE) variables, considering the intensity of drug exposure defined as a weighted function of past doses, and was incorporated into a logistic regression model that also included baseline clinical, biological and radiological characteristics. The predictive performance of this WCE model was compared to models considering on the one hand only baseline characteristics (BSL model) and on the other, baseline characteristics and binary treatments exposure - in other terms, "ever exposed, yes or no" (BIT model).
Results: Overall, SDP at 10 years occurred in 85 (27.4%) patients. GC exposure was significantly associated with SDP in univariate analysis only, and therefore was not included in the final WCE model. In the final WCE model, the joint exposure to 1 DoseQ of csDMARD and 1 DoseQ of bDMARD during the 10-year follow-up was associated with a significant protective effect on SDP compared to patients receiving no treatment: OR=0.04 (95% CI: 0.002-0.72). Early csDMARD initiation was associated with a significantly lower risk of SDP compared to later initiation (Table 1).

Table 1. odd ratios for the association of patterns of drug regimen with 10-year radiographic progression

Exposure tested	Reference	OR (95%CI)
Treatments intakes during the last 10 years		
csDMARD & bDMARD for last 10 years	No treatment for last 10 years	0.04 (0.002-0.72)
Testing the interest of an early initiation of csDMARDs (not combined with bDMARD)		
csDMARD for last 10 years	csDMARD after month 3	0.79 (0.65-0.96)
	csDMARD after month 6	0.41 (0.19-0.86)
	csDMARD after year 1	0.13 (0.02-0.80)
Testing the interest of an early initiation of bDMARDs (in association with csDMARD)		
bDMARD after month 3	No treatment for last 10 years	0.04 (0.002-0.72)
bDMARD after month 6		0.04 (0.002-0.72)
bDMARD after year 1		0.04 (0.002-0.72)
bDMARD after year 2		0.04 (0.003-0.73)
bDMARD after year 3		0.05 (0.03-0.81)

Initiation of a bDMARD between the 3rd month and 3rd year of follow-up in combination with a csDMARD was significantly associated with a lower risk of SDP compared to no bDMARD treatment (Table 1).
The final WCE model was better at predicting SDP at 10 years compared to the BSL and BIT models, with AUC=0.92 (95% CI: 0.89-0.95) (Figure 1).

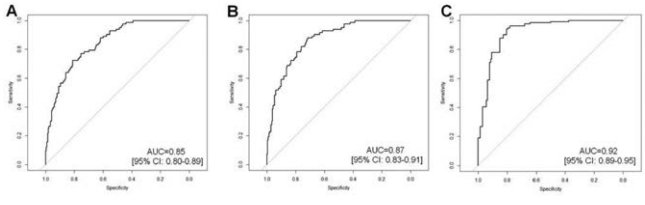

Figure 1. ROC curves of BSL model (A), BIT model (B) and WCE combined model (C) for 10-year radiographic progression

Conclusion: CsDMARDs and bDMARDs have a protective effect on radiographic progression at 10 years in RA patients. This study has shown the value of considering drug exposure in the study of RA prognosis, and modeling this exposure using WCE variables.
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THU0102 DENDRITIC CELLS AS A PREDICTOR OF GOOD CLINICAL RESPONSE IN RHEUMATOID ARTHRITIS PATIENTS

M. Korolev[1], Y. Kurochkina[1], N. Banshhikova[1], V. Omelchenko[1], E. Letyagina[1], A. Akimova[1], A. Lykov[1], O. Poveschenko[1]. *[1]Research Institute of Clinical and Experimental Lymphology - Branch of the Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russian Federation*

Background: Dendritic cells (DCs) are known to contribute to the pathogenesis of rheumatoid arthritis (RA) through presentation of cartilage glycoprotein, production of proinflammatory cytokines and activation of Th1/Th17 responses. DCs are a heterogeneous population and can be divided into groups: myeloid (mDCs) and plasmacytoid (pDCs). DCs can induce both immune response and tolerance.
Objectives: To investigate the subpopulations of peripheral blood DCs (myeloid and plasmacytoid) in patients with early RA as a predictor of responsibility to disease-modifying antirheumatic drugs (DMARDs) treatment.
Methods: Fifty two patients with early RA (duration of the disease up to 12 months) were included in the study. All patients fullfield ACR/EULAR criteria (2010) and received methotrexate, leflunomide, sulfasalazine or their combination. Fifty five patients with osteoarthritis (OA) used as a control group. Analysis of the content of the B-lymphocytes, myeloid and plasmacytoid DCs was carried out by flow cytometry. B-lymphocytes, subtypes of peripheral blood DCs were characterized by the following phenotypes: myeloid DCs (CD3-CD14-CD19-HLA-DR + CD11c + CD123-), plasmacytoid DCs (CD3-CD14-CD19-HLA-DR + CD11c-CD123 +), B-lymphocytes (CD19 +). Analyses were performed before treatment and after 3 and 6 months.
Results: Patients with early RA are characterized by significant evaluation of the population of myeloid DCs in comparison of patients with osteoarthritis (26.6% vs 23.5, p=0.0007). Furthermore, the difference was found in the number of cells with the phenotype B-lymphocytes: 5.4% vs 3%, p = 0.0005). No significant differences were observed in the number of plasmocytoid DCs. After 3 and 6 month of observation we detected reducing amount of myeloid DCs 26.6% vs 21.1% vs 18.4% respectively. Also we revealed reducing B-cells in treatment (5.4% vs 3 % vs 2%). Disease activity according to DAS28 droped to low (4.32 to3.06, p=0.03). We also revealed a reliable negative correlation between both the activity of the disease and the B- cells (rS=-0.4, p=0.05, n=52) and myeloid DCS (rS=-0.6, p=0.0004, n=52). A reducing of the immune cells during the DMARDS therapy suggests that they are an attractive marker for good clinical response to therapy.
Conclusion: The data obtained confirm the determining role of myeloid DC and B lymphocytes in maintaining systemic inflammation in rheumatoid arthritis. In addition, these cells are a target of DMARDs therapy and a predictor of a good clinical response.
Disclosure of Interests: None declared
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THU0103 COMPARISON OF BONE SCINTIGRAPHY AND FDG-PET/CT IN THE EVALUATION OF DISEASE ACTIVITY IN PATIENTS WITH RHEUMATOID ARTHRITIS: VALIDATION OF BONE SCINTIGRAPHY

S. J. Lee[1], C. M. Hong[2], E. J. Nam[3], Y. M. Kang[3]. *[1]Department of Internal Medicine, School of Medicine, Kyungpook National University, Daegu, Korea, Rep. of (South Korea)*; *[2]Department of Nuclear Medicine, School of Medicine, Kyungpook National University, Korea, Daegu, Korea, Rep. of (South Korea)*;