Results: Comparison of least squares mean difference in clinical scores showed more consistent improvement in pts treated with BARI combo vs MTX irrespective of baseline autoantibody subclass and titre. In general, pts with low-titre anti-CarbV, AcctV and MCV subclass antibodies showed numerically less improvement in most of the analyses under BARI mono vs MTX compared to BARI combo vs MTX although for anti-CarbV subclass seronegative pts, no significant differences were found in the clinical response between BARI mono vs MTX. Furthermore, anti-MCV IgA and IgM as well as anti-CarbV IgA negative status was also associated with significant reduction of radiographic progression in pts treated with BARI combo vs MTX. For seropositive pts, response to treatment with BARI mono or combination therapy was higher in pts with highest titres of anti-MCV and anti-CarbV. However, a significant difference with respect to radiographic progression was detectable only for BARI combo vs MTX. By stratifying pts according to their antibody profile, these observed radiographic differences were achieved in the anti-MCV and anti-CarbV IgG high-positive as well as anti-CarbV IgM low-positive pts.

Conclusions: In these exploratory analyses, seropositive pts with high titres of anti-MCV and anti-CarbV at baseline showed better responses to BARI mono or combo vs MTX for composite scores, and to BARI combo in structural progression outcomes.

REFERENCE:

[1] Fleischmann R, et al. *Arthritis Rheumatol* 2017;69(3):506–517.

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THU0110

EARLY TREATMENT AND LOW DOSE CORTICOSTEROIDS MIGHT DECREASE MORTALITY IN EARLY ARTHRITIS: RESULTS FROM THE RECORD LINKAGE OF CLINICAL AND ADMINISTRATIVE DATABASES

G. Sakellariou¹, C.A. Scirè^{2,3}, F. Rumi³, G. Carrara³, C. Cerra⁴, S. Migliazza⁴, R. Caporali¹, C. Montecucco¹. ¹Chair And Division Of Rheumatology, IRCCS Policlinico San Matteo Foundation, Pavia; ²Rheumatology Unit, Department of Medical Sciences, University of Ferrara, Ferrara; ³Epidemiology Unit, Italian Society of Rheumatology, Milano; ⁴Department of information and control management, ATS Pavia, Pavia, Italy

Background: In patients with rheumatoid arthritis (RA) increased mortality, especially for cardiovascular (CV) events, is still described, despite the advances in RA management.

Objectives: To evaluate the impact of early diagnosis and treatment with disease modifying anti-rheumatic drugs (DMARDs) on mortality in patients with early RA and undifferentiated arthritis (UA) through record linkage between clinical and administrative databases.

Methods: Consecutive patients with RA or UA from an early arthritis clinic (2005–2016), treated with tight control to achieve DAS28 <3.2, were included. Health assessment Questionnaire (HAQ) and date of symptom onset were recorded at baseline. Data on mortality, cause of death and drug prescription derived from administrative healthcare databases, linked to the clinical database. Cox regression models were used to evaluate the impact of the interval from symptom onset to diagnosis (categorised <3 months, 3–6 months, >6 months), from diagnosis to treatment (<3 months, >3 months, never) and from onset to treatment (<3 months, 3–6 months, >6 months, never) on overall mortality. Analyses were adjusted for age, gender, ACPA positivity, Charlson comorbidity index, HAQ and median daily prednisone dose. Results were presented as hazard ratios (HR) with 95% CI. Secondary analyses categorising prednisone in low dose (≤5 mg/day) or medium-high dose (>5 mg/day) were performed, as well as analyses evaluating CV mortality as outcome. Moreover, analyses excluding patients not receiving DMARDs and patients dying in the first year of observation were conducted.

Results: A total of 857 patients (62% RA, 73% female, median (IQR) age 59, ^{47–71} mean (sd) baseline DAS28 3.08 (0.97)) were included. After a median (IQR) follow-up of 80^{51–109} months, 77 patients died (2 in the first year); of the 41 patients with known cause of death, 9 were for CV causes. An interval >3 months between diagnosis and introduction of DMARDs or never introducing DMARDs related to higher mortality (table 1). The mean daily prednisone dose was not a significant predictor of mortality, while in all secondary analyses patients receiving low-dose prednisone, compared to those never receiving corticosteroids, had a lower mortality (eg. HR (95% CI) 0.45 (0.26,0.78) in the model including time between symptom onset and diagnosis). Patients not starting DMARDs, compared to these starting within 3 months from diagnosis, had a higher CV mortality, while the intervals between onset and diagnosis and onset and treatment were not significant predictors. Analyses limited to patients receiving DMARDs and with the exclusion of patients dying in the first year yielded to similar results.

Conclusions: In patients with early RA and UA treatment delay significantly increases mortality, while low-dose corticosteroids seem to decrease mortality. These results support strategies aiming at early access to treatment and the use of low dose corticosteroids in the initial treatment strategy.

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THU0111

FREQUENCY AND PREDICTORS OF SUSTAINED REMISSION IN PATIENTS WITH EARLY RHEUMATOID ARTHRITIS TREATED WITH CONVENTIONAL SYNTHETIC DISEASE MODIFYING DRUGS

G. Zanframundo, S. Bugatti, A. Manzo, F. Benaglio, G. Sakellariou, C. Montecucco, R. Caporali. *Early Arthritis Clinic, Division of Rheumatology, University of Pavia, IRCCS Policlinico San Matteo Foundation, Pavia, Italy*

Background: The management of patients with early rheumatoid arthritis (RA) should be aimed at reaching the target of disease remission as soon as possible. In order to prevent joint damage and disability, and eventually allow treatment withdrawal, the state of disease remission should be also maintained. Whilst point remission is frequently achieved in early RA, the sustainability of remission in clinical practice remains poorly investigated.

Objectives: To investigate the prevalence and predictors of sustained remission in patients with early RA treated with conventional synthetic disease anti-rheumatic drugs (csDMARDs).

Methods: We evaluated 533 RA patients from the Pavia early arthritis inception cohort not in remission at baseline with at least 24 months of follow-up. Patients had arthritis of short duration (<12 months of symptoms) and were treatment-naïve at presentation. After diagnosis, patients were initiated a treat-to-target regimen with methotrexate aiming at low disease activity according to the 28-joint disease activity score (DAS28 ≤3.2), and were seen at regular intervals (2 months in the first 6 months, then trimestraly). Point remission was defined as the achievement of DAS28 remission (<2.6) or SDAI (simplified disease activity index) remission (≤3.3) at any time point within the first 12 months. Sustained remission was defined as mean DAS28 <2.6 and mean SDAI ≤3.3 in the 3 visits following first remission. The frequency and predictors of point remission and sustained remission were analysed by Cox and binary regression respectively.

Results: 287/533 (53.9%) patients achieved point DAS28 remission and 234/533 (43.9%) point SDAI remission. Independent predictors of point DAS28 remission were male gender (HR [95% CI] 1.84 [1.36–2.50]), shorter symptoms' duration (HR [95% CI] 0.99 [0.98–0.99]), a lower tender joint count at baseline (HR [95% CI] 0.97 [0.94–0.99]), better functional status (HR [95% CI]

0.74 [0.59–0.94], absence of radiographic erosions (HR [95% CI] 1.52 [1.06–2.20]) and use of prednisone (HR [95% CI] 1.51 [1.36–1.74]). The same predictors were confirmed for point SDAI remission. Irrespective of the criterion, remission was maintained by only half of the patients at follow-up, resulting in sustained remission rates of 28% for DAS28 and 19% for SDAI in the entire cohort. At multivariate analysis, independent predictors of sustained remission according to either the DAS28 or the SDAI were lower time to achieve remission and deeper remission, whilst demographic factors, baseline disease activity and use of prednisone were not significant (figure 1). Using ROC curve analysis, the best discriminative ability for sustained remission were time to remission ≤ 4 months, DAS28 at remission ≤ 2.2 and SDAI at remission ≤ 1 .

Conclusions: Despite early diagnosis and prompt institution of goal-steered treatment strategies with csDMARDs, only a minority of RA patients experience sustained remission. Remission is more likely to be maintained if the target is attained rapidly after treatment institution and if joint and systemic inflammation are effectively suppressed.

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THU0112

THE INFLUENCE OF AGE AND SEX ON THE PROGRESSION OF RHEUMATOID ARTHRITIS

L. Gjerdtsson¹, J. Nilsson¹, M. Andersson², M. Leu Agelii¹, on behalf of BARFOT study group. ¹Rheumatology and Inflammation Research, University of Gothenburg, Gothenburg; ²Clinical Sciences, Section of Rheumatology, Lund University, Lund, Sweden

Background: In Europe, life expectancy is increasing and so does the incidence rheumatoid arthritis (RA), which peaks for both men and women at 70–79 years of age. Further, more than 50% of patients with RA are >65 years of age. To correctly treat and handle all patients with RA irrespective of age there is a need to study the outcome and progression of the disease depending on age of onset as this, to our knowledge, is largely unknown.

Objectives: To study how age at onset of RA influence the course of disease in men and women.

Methods: This study included 2825 patients, 68% females, from the BARFOT (Better Anti-Rheumatic Pharmacotherapy) early RA cohort. Patients were divided into males and females and into the following age groups: <40 years (yr) n=415, 40–54 year n=658, 55–69 year n=986 and ≥ 70 year n=766 at onset of disease and inclusion in the study. They were assessed at 3, 6 months and 1, 2, 5, 8 years. The following parameters were analysed: DAS28 (disease activity), VAS pain, VAS global health, 28 joint count of tender and swollen joints, respectively, ESR, rheumatoid factor (RF), antibodies to citrullinated proteins (APCA) and Health Assessment Questionnaire (HAQ). The median and 95% bootstrap confidence interval were calculated in ^{MATLAB R2015a} using the bias corrected and accelerated percentile method with 2000 bootstrap samples. Mann-Whitney U-test and Wilcoxon Rank test were used to compare groups, $p < 0.01$ was considered as significant due to multiple comparisons.

Results: At inclusion, there were no significant differences in DAS28, VAS global health, VAS pain or tender and swollen joint counts in any of the groups. From 3 months and onward, the DAS28 score were significantly lower for men compared to women in the age groups <40 year, 55–69 year and ≥ 70 year, whereas in the age group 40–54 year there were no significant differences between the sex groups (figure 1). The lowest DAS28 score, at each assessment point, was seen for RF and ACPA positive men <40 year and this group had a significantly lower DAS28 score at 8 years compared to all other groups except RF and ACPA negative men and women ≥ 70 year. At the same time, the worst outcome was seen for RF positive women and for men ≥ 70 year irrespective of RF, compared to all other groups.

In the age groups <40 year, 55–69 year and ≥ 70 year, both VAS pain and VAS global health were significantly lower in men compared to women from 3–6 month and onward. However, no differences were obtained between the sexes in the age group 40–54 year. As expected, HAQ was significantly higher among women than men in all age groups.

Conclusions: Depending on age at onset, the course of disease, measured as DAS28, differs significantly where seropositive men <40 year have the most favourable prognosis compared to both men and women ≥ 70 year the worst. No differences in DAS28, VAS global health or pain was found between men and women aged 40–54 year, which is in contrast to previous studies¹ comparing men and women without considering the age of onset. The causes for these findings need to be further investigated.

REFERENCE:

- [1] Patients with Early Rheumatoid Arthritis in the 2000s Have Equal Disability and Pain Despite Less Disease Activity Compared with the 1990s: Data from the BARFOT Study over 8 Years. *J Rheumatol* 2017 Jun;44(6):723–731.

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THU0113

LINKING SYSTEMIC ANGIOGENIC MARKERS TO SYNOVIAL VASCULARISATION IN RHEUMATOID ARTHRITIS

A. Leblond¹, S. Pezet¹, A.P. Trouvin², M. Elhai², V. Gonzalez¹, Y. Allanore², J. Avouac². ¹INSERM U1016, Institut Cochin; ²Rhumatologie A, Hôpital Cochin, Paris, France

Background: Neoangiogenesis is a crucial event to promote the development of the hyperplastic proliferative pathologic synovium in Rheumatoid arthritis (RA). Ultrasound (US) is sensitive for detection of power Doppler (PD) vascularisation.

Objectives: To explore the associations between a set of complementary circulating angiogenic markers reflecting different angiogenic processes and a comprehensive US assessment in patients with RA.

Methods: Serum levels of eight angiogenic markers (Vascular Endothelial Growth Factor (VEGF), Placenta Growth Factor (PlGF), Tie-2, Angiopoietin-1, soluble Vascular Cell Adhesion Molecule-1 (sVCAM-1), Interleukin-8 (IL-8, CXCL8), CYR61 (CCN1) and Angiostatin), reflecting endothelial cell activation, proliferation, survival, growth and migration, as well as vessel maturation and stabilisation, were measured by quantitative ELISAs in a total of 125 patients with RA, who were all systematically assessed in parallel by PDUS, performed on 32 joints.

Results: Synovitis was detected in 84 patients with RA (67.2%). Among these patients, 53 patients (42.4%) had positive Doppler signal, including 31 with moderate to marked hyperemia. Serum levels of soluble Vascular Cell Adhesion Molecule-1 (sVCAM-1) (808±293 ng/mL vs. 697±240 ng/mL, $p=0.022$) and Tie-2 (16.2 ±7.5 ng/mL vs. 13.8±4.9 ng/mL, $p=0.038$), were more likely to be increased in patients with synovial hyperemia detected on at least one joint (Power Doppler grade ≥ 1). sVCAM-1, Tie-2 and Angiostatin concentrations gradually increased together with the grade of the semiquantitative PDUS scale (figure 1A-C) and concentrations of these three markers were markedly increased in patients with