Conclusions: Treatment with tofacitinib is associated with a rapid improvement and sustained reduction of pain in pts with RA and PsA who are csDMARD-IR or TNFi-IR, and in pts with AS.

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SAT0223 PREDICTIVE FACTORS OF EARLY FAILURE TO FIRST LINE TREATMENT WITH METHOTREXATE IN PATIENTS WITH PREDOMINANTLY RHEUMATOID ARTHRITIS. RESULTS FROM THE GISEA REGISTRY.

A. Manfredi on behalf of GISEA, M. Sebastiani1, F. Iannone2, E. Gremsese, A. Bortoluzzi3, E. G. Favalli, R. Goria4, F. Salaffi5, E. Fusaro7, R. Foii6, L. Cantarini1, R. Caporal1, A. Cau1, S. Aliverini6, F. P. Cantatore5, A. Carletti1, F. Conti1, D. D’Angelo1, E. Epis1, R. Ramondetta1, A. Marchesoni1, F. Alzetti1, P. Zarcu-Orugini1, G. Ferraccioli1, G. Lapadula1 on behalf of GISEA (Gruppo Italiano Studio Early Arthritis).

Rheumatology Unit, University of Modena and Reggio Emilia, Modena, "Rheumatology Unit, University of Bari, Bari, "Rheumatology Unit, Catholic University of Sacred Heart, Rome, "Rheumatology Unit, University of Ferrara, Ferrara, "Rheumatology Unit, Gaetano Pini Institute, Milano, "Rheumatology Unit, Speciali Civili di Brescia, Brescia, "Rheumatology Unit, Università Politecnica delle Marche, Jesi, "Rheumatology Unit, AOU Città della Salute e della Scienza, Torino, "Rheumatology Unit, Policlinico Vittorio Emanuele, Catania, "Rheumatology Unit, University of Siena, Siena, "Rheumatology Unit, University of Pavia, Pavia, "Rheumatology Unit, University of Cagliari, Cagliari, "Rheumatology Unit, University of Foggia, Foggia, "Rheumatology Unit, University of Verona, Verona, "Rheumatology Unit, University La Sapienza, Rome, "Rheumatology Unit, Azienda Ospedaliera Regionale “San Carlo”, Potenza, "Rheumatology Unit, Niguarda Hospital, Milano, "Rheumatology Unit, University of Padova, Padova, "Rheumatology Unit, University of Messina, Messina, "Rheumatology Unit, Sacco Hospital, Milano, Italy

Background: Methotrexate (MTX) is generally recommended as first-line treatment of rheumatoid arthritis (RA). Despite its efficacy is well established, a percentage of patients fails the treatment. Few studies investigated the causes of early discontinuation of MTX: a two-year retention rate of about 66% is described for RA patients with longer age and longer disease duration as independent predictors for discontinuation.

Objectives: Aim of this study was to detect possible predictive factors for early discontinuation of MTX prescribed as first line treatment in RA patients enrolled in the GISEA (Italian Group for the Study of Early Arthritis) registry.

Methods: RA patients who began MTX as first line treatment were included in the study. For all patients, age, sex, disease duration, smoking status, the intake of glucocorticoids, clinical and serological data, comorbidities and extra-articular manifestations were collected.

Results: We analyzed 612 RA patients (females/males 477/132, mean age 55.73±14.5 years; mean DAS28 5.35±1.5); rheumatoid factor (RF) was positive in 55.73±14.5 years; mean DAS28 5.35±1.5); anti-citrullinated peptide antibodies (ACPA) in 42.7%. Comorbidities were observed in 17.5% of patients, while extra-articular RA manifestations were recorded in 64.9%, anti-citrullinated peptide antibodies (ACPA) in 42.7%. Comorbidities were observed in 17.5% of patients, while extra-articular RA manifestations were recorded in 64.9%, anti-citrullinated peptide antibodies (ACPA) in 42.7%. Comorbidities were observed in 17.5% of patients, while extra-articular RA manifestations were recorded in 64.9%, anti-citrullinated peptide antibodies (ACPA) in 42.7%. Comorbidities were observed in 17.5% of patients, while extra-articular RA manifestations were recorded in 64.9%, anti-citrullinated peptide antibodies (ACPA) in 42.7%. Comorbidities were observed in 17.5% of patients, while extra-articular RA manifestations were recorded in 64.9%, anti-citrullinated peptide antibodies (ACPA) in 42.7%. Comorbidities were observed in 17.5% of patients, while extra-articular RA manifestations were recorded in 64.9%, anti-citrullinated peptide antibodies (ACPA) in 42.7%. Comorbidities were observed in 17.5% of patients, while extra-articular RA manifestations were recorded in 64.9%, anti-citrullinated peptide antibodies (ACPA) in 42.7%. Comorbidities were observed in 17.5% of patients, while extra-articular RA manifestations were recorded in 64.9%, anti-citrullinated peptide antibodies (ACPA) in 42.7%. Comorbidities were observed in 17.5% of patients, while extra-articular RA manifestations were recorded in 64.9%, anti-citrullinated peptide antibodies (ACPA) in 42.7%. Comorbidities were observed in 17.5% of patients, while extra-articular RA manifestations were recorded in 64.9%, anti-citrullinated peptide antibodies (ACPA) in 42.7%. Comorbidities were observed in 17.5% of patients, while extra-articular RA manifestations were recorded in 64.9%, anti-citrullinated peptide antibodies (ACPA) in 42.7%. Comorbidities were observed in 17.5% of patients, while extra-articular RA manifestations were recorded in 64.9%, anti-citrullinated peptide antibodies (ACPA) in 42.7%. Comorbidities were observed in 17.5% of patients, while extra-articular RA manifestations were recorded in 64.9%, anti-citrullinated peptide antibodies (ACPA) in 42.7%. Comorbidities were observed in 17.5% of patients, while extra-articular RA manifestations were recorded in 64.9%, anti-citrullinated peptide antibodies (ACPA) in 42.7%. Comorbidities were observed in 17.5% of patients, while extra-articular RA manifestations were recorded in 64.9%, anti-citrullinated peptide antibodies (ACPA) in 42.7%. Comorbidities were observed in 17.5% of patients, while extra-articular RA manifestations were recorded in 64.9%
and swollen joints count (p<0.001 and p=0.024, respectively). Age and tender joint counts were confirmed at multivariate analysis (OR 1.014, 95% CI 1.001–1.027 and OR 0.951, 95% CI 0.923–0.981, respectively) as independent predictors of early withdrawal of MTX.

**Conclusions:** More than 75% of RA patients treated with MTX as first-line therapy remained in treatment after 12 months. Age was directly correlated and tender joint counts was inversely correlated with early withdrawal of MTX in RA patients.

**Disclosure of Interest:** None declared

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**SAT0224**

**AMELIORATION OF INFLAMMATORY DISEASE ACTIVITY AND VASCULAR INFLAMMATION WITH HMG-CoA REDUCTASE INHIBITION AND ANGIOTENSIN RECEPTOR BLOCKADE IN RHEUMATOID ARTHRITIS**

A. Syngra1,2, N. Garg3, P. Krishna2,1, Cardio Rheuma, Healing Touch City Clinic, Chandigarh, 1Internal Medicine & Rheumatology, Fortis Hospital, Mohali, 2Department of Pharmaceutical Sciences & Drug Research, Punjabi Univ., Patiala, India

**Background:** Rheumatoid Arthritis (RA) has 50% increased risk of cardiovascular (CV) mortality.1 Similarities between atherosclerosis and RA and proven benefit of Angiotensin receptor Blockers and HMG-CoA reductase inhibitors in atherosclerotic vascular disease provide strong rationale to investigate the impact of Rosuvastatin, HMG-CoA reductase inhibitor and Olmesartan, an angiotensin receptor blocker on inflammatory disease activity and vascular inflammation in RA.

**Objectives:** To investigate the impact of Rosuvastatin and Olmesartan on inflammatory disease activity and vascular inflammation in RA.

**Methods:** 84 RA patients randomized to 3 groups to receive 24 weeks of treatment with Rosuvastatin (Rvs) (10 mg/day, n=28), Olmesartan (OLME) (10 mg/day, n=28) and placebo (PL) (n=28) as an adjunct to existing stable antirheumatic drugs. 2 patients from the OLME group were lost to follow up. FMD was assessed by AngioDefender. EPCs were estimated by flow cytometry. Measures of vascular inflammation: serum nitrite, TBARS, adhesion molecules (ICAM-1 and VCAM-1) and lipids were measured at baseline and after treatment. Inflammatory measures included DAS28, SDAI, CRP and ESR, pro-inflammatory cytokines (TNF-α, IL-6 and IL-1). SCORE system estimated the 10 year risk of a first fatal atherosclerotic event. Quality of life was assessed with HAQ-DI and SF-36.

**Results:** At baseline, FMD correlated inversely with DAS28 (r=-0.42, p<0.05) and TNF-α (r=-0.50, p<0.05) and positively correlated with EPCs (r=0.44, p<0.05) in all three groups indicating high inflammatory disease activity and decreased EPCs population associated with endothelial dysfunction. FMD also correlated inversely with CRP in both Rvs (r=-0.46, p<0.05) and OLME (r=-0.40, p<0.05) groups. After treatment, FMD improved significantly in the Rvs vs. OLME vs. PL group from their baseline levels, respectively (Rvs vs. PL (p<0.01), OLME vs. PL (p<0.03), Rvs vs. OLME (p=0.03)) (Fig.1A). The improvement in FMD after treatment with Rvs was significantly greater than OLME (Rvs vs. OLME (p=0.03)). EPCs and nitrite levels were improved significantly in both Rvs and OLME groups. A significant reduction was found in ICAM-1 after Rvs treatment (p<0.01) where as OLME significantly decreased VCAM-1 and TBARs (p=0.04), (p=0.01) respectively. Both Rvs and OLME resulted in significant reductions of DAS28 (figure 1B), SDAI, ESR, CRP (figure 1C), IL-6 and TNF-α (figure 1D) vs. PL. There was a significant reduction in the SCORE, HAQ-DI and SF-36 after treatment with Rvs and OLME.

**Conclusions:** Rvs and OLME ameliorate inflammatory disease activity and vascular inflammation in RA. Both Rvs and OLME lowers the TNF-α & IL-6 which down regulates the production of CRP and NO and improved EPC population and FMD. However, Rvs also favourably impacted ICAM-1 and lipid abnormalities while OLME has beneficial effect on VCAM-1, TBARs and blood pressure. Thus, both Rvs and OLME ameliorate inflammatory disease activity, reduce cardiovascular risk in context of vascular inflammation, endothelial dysfunction and EPCs biology.

**Disclosure of Interest:** None declared

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**COMPARATIVE EFFECTIVENESS IN PAIN AND HAQ-DI IMPROVEMENT FOR BARICITINIB VERSUS ADALUMAB, TOCILIZUMAB, AND TOFACITINIB MONOTHERAPIES IN CSDMARD-NAÏVE RHEUMATOID ARTHRITIS PATIENTS: A MATCHING-ADJUSTED INDIRECT COMPARISON (MAIC)**

B. Fautrel1, B. Zhu2, P. C. Taylor3, M. van de Laar4, P. Emery5, F. De Leonardis6,1, C. Gaich2, C. Nicolay2, Z. Kadziola2,1. University Pierre et Marie Curie, Paris, France, 2Eli Lilly and Company, Indianapolis, United States, 3Boehringer Research Centre, Univ of Oxford, Headington, United Kingdom, 4RheumArthritis Center Twente, Enschede, Netherlands, 5Leeds MSK Biomed-Chapel Allerton Hosp, Leeds, United Kingdom, 6Univ of Texas Southwestern Med Ctr, Dallas, United States

**Background:** In Phase 3 trial, RA-BEGIN, baricitinib (BARI) monotherapy demonstrated superiority to MTX in pain reduction and HAQ-DI improvement in treatment of csDMARD-naïve active RA patients.1 No prospective head-to-head (H2H) trial data are available comparing BARI monotherapy vs. bDMARD mono-therapy in csDMARD-naïve RA patients.

**Objectives:** To assess pain and HAQ-DI for BARI monotherapy from a randomized, MTX-controlled trial vs adalimumab (ADA), tocilizumab (TCZ), and tofacitinib (TOFA) monotherapy from similar randomized, MTX-controlled trials in csDMARD/bDMARD naïve RA patients using matching-adjusted indirect comparison (MAIC).

**Methods:** Individual patient data from the RA-BEGIN BARI 4 mg arm were weighted to match baseline characteristics of the ADA arm from PREMIER,9 TOFA 5 mg arm from ORAL-START,7 and TCZ 8 mg/kg arm from combination of AMBITION and FUNCTION,4,5 respectively; MTX arms were also matched between trials. Method of moments was used to determine weights for age, gender, baseline disease scores, and baseline values of the outcome variable. Mean change on pain VAS and HAQ-DI at Week 24 for BARI were adjusted for the above baseline characteristics with the weighted linear model, and then indirectly compared vs. respective published results for Week 24 TCZ and TOFA and for Week 26 ADA data. Statistical significance of the weighted treatment effect was assessed with the bootstrap method. Sensitivity analyses included MAIC with study level matching9, Bucher’s method without matching adjustment1, and inclusion of disease duration as an additional matching variable.

**Results:** Across trials, the mean baseline pain VAS ranged from 58.7 to 65.2 with a 6-month mean change in pain of -28.5 to -33.5 for the MTX arm, indicating comparability between trials. Similar HAQ-DI and changes in HAQ-DI for the MTX arm were observed. At Week 24, BARI showed numerically greater improvement over MTX in pain than that for TCZ, ADA, and TOFA; statistically significant pain improvement were observed for BARI vs ADA and TCZ with all 3 matching methods but only with the Bucher method for TOFA (figure 1). BARI-treated patients showed significantly greater improvement in HAQ-DI at Week 24 than TCZ and ADA but not TOFA (figure 1). Sensitivity analyses showed consistent results.

**Disclosure of Interest:** None declared

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