Results: Of 385 patients with RA were included in the analysis. Their demographics are shown in the Table.1 Patients scoring 3 or more on the PHQ had more severe RA (higher DAS/HAQ), but there was no significant difference in age, sex or disease duration. 124 (32%) reported no work disability, with the overall mean score 3.0. Patients screening positive for depression had a significantly lower work ability even after adjusting for available confounders.
Conclusions: There is a significant correlation between depression in RA and work ability, which persists even after accounting for disease severity. The magnitude of association observed was even greater than that seen between physical function and work. Although unmeasured confounding remains likely, these data confirm the link between depression and work in RA. It is likely that the relationship is bidirectional, between depression and work in RA. Beyond the importance of addressing work ability in RA, the results highlight the need for screening and targeting depression as part of routine clinical care beside the holistic approach of mangement.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.6513

SAT0099 POLYPHARMACY IS ASSOCIATED WITH AN INCREASED RISK OF ADVERSE OUTCOMES IN PATIENTS WITH RHEUMATOID ARTHRITIS

A.D. Amarilla Vallejo[1], A. Rutherford[1], M. Filkova[2], M. Molokhia[3], E. Nikiphorou[1], S. Norton[1], K. Hyrich[4], J. Galloway[1]. *[1]Academic Department of Rheumatology, King's College London, London, United Kingdom; [2]Institute of Rheumatology and Department of Rheumatology, 1st Faculty of Medicine, Charles University, Prague, Czech Republic; [3]Primary Care and Public Health Sciences, King's College London, London; [4]Arthritis Research UK. Epidemiology Unit, University of Manchester, Manchester, United Kingdom*

Background: In the general population, polypharmacy (PP) is associated with increased risk of adverse events. The relationship between adverse outcomes and PP in Rheumatoid Arthritis (RA) has not been studied in depth. The mantra of treatment in RA encourages PP through combination Disease Modifying Anti-Rheumatic Drugs (DMARD).
Objectives: To study the relationship between PP and serious adverse events in RA, including the influence of DMARDs within the PP count.
Methods: Data from the British Society for Rheumatology Biologics Register were analysed. PP was defined as number of drugs co-prescribed at baseline, with two models: (1) including DMARDs (2) excluding DMARDs from the medication count. PP was stratified by 0–5, 6–9 and >10. Patients were studied from initiation of 1st biologic until 1st serious adverse event (SAE), 3 years of follow up, or last available visit, whichever came first. A Cox-proportional hazard model was used, with adjustment for a priori selected cofounders.
Results: This study included 15,004 patients commencing biologics. The demographics are shown in table 1. Excluding DMARDs from the PP cohort, 7,115 (47%) of the patients were taking up to 5 drugs; 6,010 (40%) were taking 6 to 9 drugs; 1,870 (12%) were taking 10 or more medications. Higher levels of PP associated with older age, more severe disease, and longer disease duration. PP predictably associated with comorbidities; the relationship was not linear: comorbidity count appeared to show a ceiling effect. The overall incidence of SAEs was 25.5/100 person years (95% CI 24.7–26.3). The rate of SAEs increased across the PP counts (See Table 1). The relationship remained significant after adjusting for comorbidities. Including DMARDs within the PP count attenuated the association.
Conclusions: PP is common in patients with RA and is associated with adverse outcomes especially when patients are on >10 drugs. Including or excluding DMARDs from the PP model had negligible impact on findings. The relationship between PP and comorbidity is worthy of further research, as PP represents a potentially simple but valuable predictor of adverse outcomes, and a suitable surrogate for comorbidity in epidemiological analyses.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.2262

Abstract SAT0099 – Table 1

	All Patients	0–5 drugs	6–9 drugs	>10 drugs
		PP count excluding DMARDs		
	N=15,004	n=7,115	n=6,019	n=1,870
Baseline characteristics				
Mean Age in years	56.3	54.0	57.6	61.0
Mean DAS 28 (SD)	4.30 (1.76)	4.17 (1.79)	4.51 (1.67)	4.88 (1.67)
Mean HAQ (SD)	1.93 (0.64)	1.85 (0.65)	2.10 (0.56)	2.15 (0.58)
Mean Disease Duration (SD) in years	12.59 (9.72)	11.96 (9.32)	13.79 (10.26)	14.67 (10.96)
Comorbidity (SD)	1.87 (0.80)	1.65 (0.74)	2.29 (0.73)	2.57 (0.68)
Analysis of Serious Adverse Events				
Exposure time (person-years)	14,200	9,690	3,706	804
Event count (single failure model)	3261	2002	1251	368
Incidence rate (95% CI)	25.5 (24.7–26.3)	20.6 (19.7–21.5)	33.7 (31.9–35.6)	45.7 (41.3–50.7)
Including DMARDs in PP model				
Unadjusted HR (95% CI)	–	Ref	1.20 (1.11–1.29)	1.82 (1.66–1.99)
Adjusted HR (95% CI)	–	Ref	1.05 (0.97–1.13)	1.39 (1.26–1.54)
Excluding DMARDs in PP model				
Unadjusted HR (95% CI)	–	Ref	1.63 (1.52–1.75)	2.21 (1.98–2.47)
Adjusted HR (95% CI)	–	Ref	1.18 (1.09–1.28)	1.35 (1.19–1.53)

Adjusted for age, sex, DAS, HAQ, disease duration and comorbidities.

SAT0100 ACPA AND ABDOMINAL ADIPOSITY ARE INDEPENDENT PREDICTORS OF INCREMENTS IN BASAL INSULIN IN PATIENTS WITH RA

E. Gomez-Bañuelos[1], K. Arrona-Rios[2], S. Duran-Barragan[3], L. Gonzalez-Rosas[2], J. Aguilar-Arreola[2], F.D.J. Perez-Vazquez[1], G.-I. Diaz-Rubio[1], E. Chavarria-Avila[1], F. Corona-Meraz[1], A. Saldaña-Millan[1], R.-E. Navarro-Hernandez[1], M. Vázquez-Del Mercado[1,2]. *[1]Instituto de Invesgitación en Reumatología y del Sistema Musculoesquelético, Universidad de Guadalajara; [2]Servicio de Reumatología, División de Medicina interna, Pnpc 004086, CONACyT; [3]Instituto de Invesgitación en Reumatología y del Sistema Musculoesquelético, Hospital Civil de Guadalajara, "Juan I. Menchaca", Guadalajara, Mexico*

Background: Insulin resistance (IR) is a comorbidity found in about 40%of RA patients. Currently, there is little information regarding the role of antibodies against citrullinated proteins and IR development in RA. Patients positive for ACPA and/or RF may be at higher risk of IR since these group of patients has a higher expression pro-inflammatory citokines like TNFa and IL-6, both implicated in the pathogenesis of IR.
Objectives: To analyze the contribution of autoantibodies positivity (ACPA and/or RF) and their impact in the development of IR in patients with RA.
Methods: We retrospectively analyzed patients classified with RA per ACR 1987 and ACR/EULAR 2010 criteria with at least one year of follow-up in a cohort of RA patients without comorbidities from Hospital Civil "Juan I. Menchaca". DAS-28, basal insulin, HOMA-IR and anthropometric parameters: Body weight, body mass index (BMI), Sum 4 skinfold thicknesses (S4T), Waist to hip ratio (WHR), waist circumference (WC) and total fat mass (FM); were determined at current and baseline. Mean differences between the two time points were calculated. A multiple regression model was constructed considering mean insulin change as dependent variable.
Results: We studied 57 RA patients, 44% (25) with IR and 56% (32) without IR. Of these, 21% (12) developed IR during follow-up. BMI, FM and ST4 were higher at baseline in patients with current IR at baseline. Ptients who developed IR during follow-up had a mean increase of DAS-28 of 1.27 ($P<0.005$ vs. patients who improved or never developed IR). Patients positive for ACPA had a greater increase in IR during follow-up. Multivariate analysis revealed that ACPA, increments in WHR and ST4 were independent predictors of basal insulin increases during follow-up.
Conclusions: ACPA and abdominal adiposity (WHR) are independent predictors of IR development in RA
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.6862

SAT0101 POSSIBILITY OF BACTERIAL INFECTION PROPHYLAXIS OF TRIMETHOPRIM-SULFAMETHOXAZOLE IN ELDERLY PATIENTS WITH RHEUMATOID ARTHRITIS UNDERGOING TREATMENT WITH BIOLOGICS: A SINGLE-CENTER, RETROSPECTIVE, CASE-CONTROL STUDY

E. Kikuchi, N. Aoki, T. Yoshioka, T. Okai. *Center for Rheumatology and Joint Surgery, Kawakita General Hospital, Tokyo, Japan*

Background: Trimethoprim-sulfamethoxazole (TMP-SMX) is widely used for the prophylaxis of *Pneumocystis jiroveci* pneumonia (PCP) in immunocompromised patients, but data about the prophylactic effect of TMP-SMX against bacterial infections are insufficient.
Objectives: To analyze the prophylactic effect of TMP-SMX against severe bacterial infections in elderly patients with rheumatoid arthritis undergoing treatment with biologics.
Methods: Data were retrospectively collected from the medical records of patients with rheumatoid arthritis at our center. We divided the elderly patients (65 years or above) who took biologic agents into two groups. The first group (TMP-SMX+) comprised patients who previously or concurrently started TMP-SMX with biologic

agents for the purpose of PCP prophylaxis and continued with it throughout the treatment with biologics. The second group (TMP-SMX−) comprised patients who were not prescribed TMP-SMX throughout the treatment with biologics. We analyzed the retention rate of each group by Kaplan-Meier curves and the Wilcoxon test. The primary end point was the 18-month retention rate of biologics without severe infection (defined as hospitalization or multiple days of intravenous antibiotic treatment in the clinic, including suspected cases).

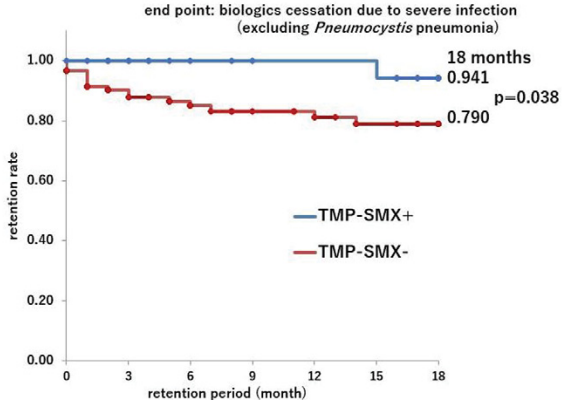
Results: The TMP-SMX+ group included 30 patients with a mean age of 76.7±7.0 years. The rate of ACPA positivity was 80.0%, MTX use was 73.3%, oral steroid use was 43.3%, and bio-naive patients was 73.3%. The number of patients treated with abatacept, certolizumab pegol, etanercept, golimumab, infliximab, and tocilizumab was 13, 1, 7, 7, 1, and 1, respectively. The cumulative retention rates at 12 and 18 months were 1.000 and 0.941, respectively. Prophylactic doses of TMP-SMX were between TMX 20mg/SMX 100mg/day and TMX 91mg/SMX 457mg/day.

The TMP-SMX− group included 113 patients with a mean age of 73.6±5.6 years. The rate of ACPA positivity was 79.3%, MTX use was 70.8%, oral steroid use was 54.9%, and bio-naive patients was 80.5%. The number of patients treated with abatacept, adalimumab, certolizumab pegol, etanercept, golimumab, infliximab, and tocilizumab was 15, 15, 4, 41, 7, 18, and 13, respectively. The cumulative retention rates at 12 and 18 months were 0.812 and 0.790, respectively. There was a significant difference between the retention rates in the two groups (p =0.038, Wilcoxon test). Five patients were enrolled in both groups because another biologic agent was used in different periods.

In the TMP-SMX+ group, only one patient was hospitalized for probable bacterial pneumonia (causative bacteria not detected). In the TMP-SMX− group, nine patients were hospitalized for pneumonia, three for septic arthritis, two for urinary tract infection, and two for soft tissue infection. The causative bacteria were *Escherichia coli*, *Klebsiella oxytoca*, *Enterococcus faecalis* and others.

Furthermore, seven patients in the TMP-SMX− group were treated for PCP, whereas no patients contracted PCP in the TMP-SMX+ group.

The retention rates of biologics for elderly (≧65 years) RA patients



Conclusions: Prophylactic administration of TMP-SMX may reduce the risk of bacterial infection in elderly patients with rheumatoid arthritis undergoing treatment with biologics.

References:

[1] Limper AH et al. Am J Respir Crit Care Med. 2011;183(1):96–128.
[2] Katsuyama et al. Arthritis Res Ther. 2014 Feb 5;16(1):R43. doi: 10.1186/ar4472.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.4650

SAT0102 THE EFFECT OF LACTATION ON THE ACTIVITY OF RHEUMATOID ARTHRITIS

E. Matianova, N. Kosheleva. *V.A. Nasonova Research Institute of Rheumatology, Moscow, Russia, Moscow, Russian Federation*

Background: It has been reported that rheumatoid arthritis (RA) onset in females is often associated with post-partum period and lactation. Moreover, flares of pre-existing RA occur in 33–91% of cases during post-partum and breastfeeding periods.

Objectives: To assess the effect of lactation on RA activity during the post-partum period.

Methods: Prospective study included 32 RA pts (ARA criteria, 1987) who were followed up and assessed at 30–34 weeks of pregnancy, and at 1, 3, 6 and 12 months post-partum. Pts' median age was 29 (20–37) years, disease duration 8 (1–28) years. RF (62,1%) and ACPA (58,6%) seropositive, of radiographic stage 2–3 (72,4%) and functional class 1–2 (86,2%) prevailed. At each control visit DAS28^{CRP} score and the number of between the visits flares were obtained among breastfeeding and non-breastfeeding women. RA flare was documented based on changes in DAS28^{CRP} score values vs the previous visit following EULAR recommendations.

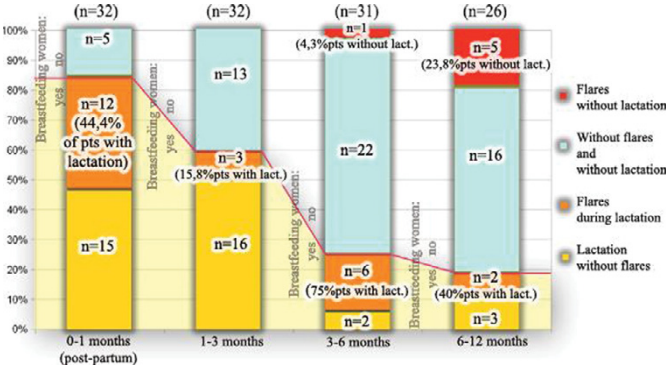
Results: 6 pts were lost for follow up (FUP; the 1 after Mo 3?, 5 after Mo 5–6 post-partum). Lactation immediately after birth was suppressed in 5 (15,6%)pts. 27 (84,4%)pts were breast-feeding their babies for the period from 2 weeks to 16 months (Me=2,5 [1;6] months). All relevant data on the study population during the FUP is summarized in the Table1.

During the whole FUP the DAS28^{CRP} score was higher among breast-feeding females, although the difference was statistically significant only during the first month post-partum (p=0,01). During the first month post-partum, as well as at Mo3 post-partum RA flares were registered only in nursing mothers, i.e. in 12 out of 27, and in 3 out of 19, respectively. The number of nursing mothers after 3d month was reduced to 8. RA flares in these breast-feeding women were more frequent, than in non-breast-feeders during 3 to 6 months period of the FUP: 6 vs 1 (RR=10,3, 95% CI=2,6;40,1; p=0,0002).Only after 6 mo postpartum the rate of RA flares among nursing mothers did not statistically significant exceed the rate among non-feeders (in 2 out of 5 vs 5 out of 21, p>0,05) (Fig.1).

Assessment of RA flares at all 121 points during 12 months post-partum FUP (59 points during lactation, 62 – after termination of lactation) demonstrate that RA flares were documented in 23 (39%) lactating women and in 6 (9,7%) non-lactating women. Therefore, the risk of RA flare in lactating women was 4-fold higher vs the risk in non-lactating women (RR=4; 95% CI=1,8;9,2; p=0,0002).

Increased RA exacerbation rates among nursing mothers is partially explained by postponement of active therapy. The majority of pts refused initiation of therapy for the sake of breastfeeding.

Approaches to breastfeeding practices in RA mothers should be individual. Nursing is acceptable during RA remission or low disease activity given the patient continues on the recommended drugs, compatible with breast-feeding.



Conclusions: Lactation and breastfeeding is associated with 4-fold higher risk of RA exacerbation as compared to non-breastfeeding population (RR=4; 95% CI=1,8;9,2; p=0,0002)

References:

[1] Hazes JM at all. Rheumatoid arthritis and pregnancy: evolution of disease activity and pathophysiological considerations for drug use. Rheumatology. 2011 Nov;50(11):1955–68.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2017-eular.4874

SAT0103 NON-DIPPING STATUS IS ASSOCIATED WITH DIASTOLIC NOCTURNAL HYPERTENSION IN PATIENTS WITH RHEUMATOID ARTHRITIS

E. Troitskaya, S. Velmakin, S. Villevalde, Z. Kobalava. *Propaedeutics of internal disease, RUDN University, Moscow, Russian Federation*

Background: Rheumatoid arthritis is associated with increased cardiovascular risk. Nocturnal hypertension and non-dipping status are important determinants of cardiovascular mortality and morbidity. Little is known about their associations in patients with RA.

Objectives: The aim of the study was to assess the prevalence of nocturnal hypertension and its associations in patients with RA.

Methods: 62 patients with RA (EULAR 2010) without known cardio-vascular disease were examined (73% females, age 58,5±15,4 (M±SD) years, 13%

Abstract SAT0102 – Table 1. The mean DAS28^{CRP} scores in the groups

	III pregn trimester		1 month		3 month		6 month		12 month	
	n	DAS28^{CRP}	n	DAS28^{CRP}	n	DAS28^{CRP}	n	DAS28^{CRP}	n	DAS28^{CRP}
Nursing mothers	–	–	27	3,6±1,2*	19	3,4±1,2	8	3,7±1,1	5	3,2±1,5
Nonnursing mothers	32	3±1,2	5	3,1±1,4*	13	3,3±1,9	23	2,9±1,4	21	2,9±1,1

*p=0,01.