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).

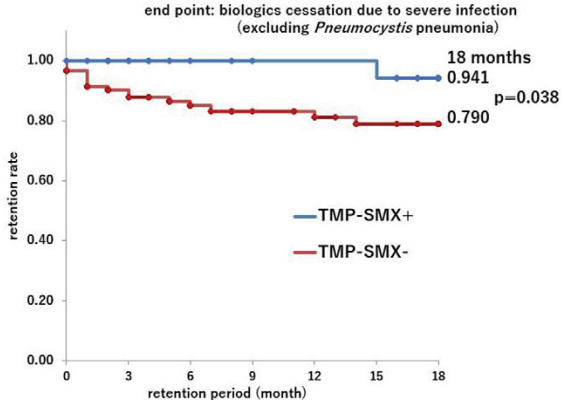
Results: The TMP-SMX+ group included 30 patients with a mean age of 76.7±7.0 years. The rate of ACPA positivity was 80.0%, MTX use was 73.3%, oral steroid use was 43.3%, and bio-naive patients was 73.3%. The number of patients treated with abatacept, certolizumab pegol, etanercept, golimumab, infliximab, 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.

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SAT0102 THE EFFECT OF LACTATION ON THE ACTIVITY OF RHEUMATOID ARTHRITIS

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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.

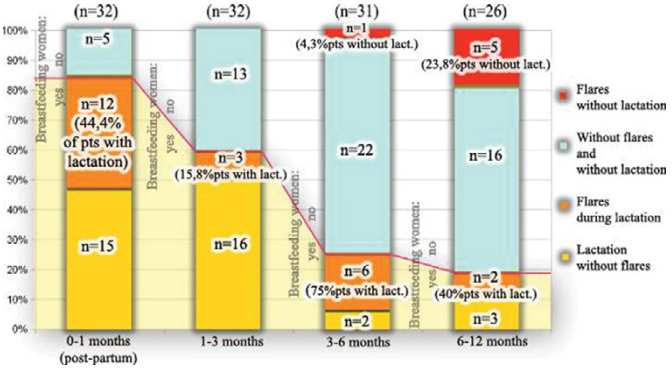
Results: 6 pts were lost for follow up (FUP; the 1 after Mo 3?, 5 after Mo 5–6 post-partum). Lactation immediately after birth was suppressed in 5 (15,6%)pts. 27 (84,4%)pts were breast-feeding their babies for the period from 2 weeks to 16 months (Me=2,5 [1;6] months). All relevant data on the study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

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

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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.

smokers, 61% with AH, 34% with dyslipidemia). Median duration of RA was 8 years (IQR 3–17). Seropositive RA was diagnosed in 69% of patients. Median CRP was 12,1 mg/dl (IQR 2,2–23,4 mg/dl), median rheumatoid factor (RF) was 32,5 IU/ml (IQR 8,3–173 IU/ml). All patients received disease-modifying antirheumatic drugs, 22 (38%) - biological treatment. Median duration of AH was 6,1 years (IQR 0–10 years. All patients with AH received antihypertensive treatment. 24-h peripheral and central BP monitoring was performed (BPLab Vasotens, "Petr Telegin"). Arterial stiffness was assessed by applanation tonometry (Sphygmocor, AtCor, Australia). $P<0.05$ was considered significant.

Results: Mean office BP was 130±15/80±10 mmHg. Mean pulse wave velocity (PWV) was 9,3±3,2 m/s. The dipping states were as follows: non-dipping in 39 (62,9%) patients, dipping – In 7 (11,3%), extreme dipping – in 5 (8,1%) and reverse dipping in 11 (17,7%). Median of nocturnal fall in systolic BP was 3,5% (IQR 0–9%). Isolated nocturnal AH was observed in 12 (19,4%) pts. Patients were divided into 2 groups according to nocturnal fall of BP: G1 (non-dipping - >10%) – 42 (67,7%) pts and G2 (dipping- <10%.) – 16 (32,3%) pts. Non-dippers were older (56,7±16,2 vs 49±12,5 years), more often were smokers (20 vs 0%), had higher BMI (25,4±6,0 vs 22,3±5,1 kg/m^2), median duration of AH (1,5; IQR 0–11 vs 0; min 0, max 1 years), median duration of RA (10; IQR 7–19 vs 2,5; IQR 2–6,5 years), PWV (8,6±2,8 vs 7,2±2,1 m/s), nocturnal BP (120,4±12,7/69,8±10,4 vs 103,8±8,8/59,4±4,4 mmHg), $p<0,05$ for trend. Spearmen analysis revealed significant correlations between nocturnal fall in SBP and RA duration (r=-0,3), central BP (r=0,2 for SBP and DBP), night SBP and DBP (r=-0,3 and -0,5 respectively), $p<0,05$ for trend. Multiple regression analysis showed that elevation of central office DBP and night DBP were significant predictors of non-dipping state (β=-3,7, p=0,008 and -0,7, $p<0,0001$ respectively).

Conclusions: The majority of patients with rheumatoid arthritis are characterized by non-dipping state. Diastolic nocturnal hypertension is a significant predictor of non-dipping in this patient population.

References:

[1] Androulakis E., Papageorgiou A., Chatzistamatiou E. et al. Improving the detection of preclinical organ damage in newly diagnosed hypertension: nocturnal hypertension versus non-dipping pattern J Hum Hypertens 2015;29:689–695.
[2] Redon J., Lurbe E. Nocturnal blood pressure versus nondipping pattern. What do they mean? Hypertension 2008;51:41–42.
[3] Kim B., Kim Y., Lee Y. A Reverse Dipping Pattern Predicts Cardiovascular Mortality In a Clinical Cohort. J Korean Med Sci 2013;28:1468–1473.
[4] Hamamoto K., Yamada S., Yasumoto M. et al. Association of nocturnal hypertension with disease activity in rheumatoid arthritis. Am J Hypertens 2016;29:340–7.

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SAT0104 THE IMPACT OF DISEASE ACTIVITY ON PATIENT REPORTED COGNITIVE DYSFUNCTION ("BRAIN FOG") IN RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis (RA) is a systemic, inflammatory disease and its burden extends beyond joint disease. In recent years, there has been significant advances in treating joint disease but we need a greater understanding of physical and especially psychosocial comorbities to improve quality of life in RA patients. In particular, patients often report "brain fog" meaning a diminished ability to think, learn, remember and perform other mental tasks. Doctors have long recognized that patients with certain physical conditions can experience cognitive dysfunction. Limited information is available in the literature with regard to the prevalence of cognitive dysfunction and factors associated with the condtion in RA.

Objectives: To characterize the association of disease activity with patient reported cognitive dysfunction in patients with RA overall and stratified by age.

Methods: We identified patients with RA aged ≥18 years who were enrolled in the Corrona registry who were biologic naïve at their last follow-up visit (October 2010–June 2016). We compared those who reported cognitive dysfunction (responded "yes" to the question asking if they had "problems with thinking") to those who did not with respect to disease activity based on the Clinical Disease Activity Index (CDAI). Unadjusted and adjusted logistic regression models controlling for demographic (age, gender, race, education), comorbidity/lifestyle (diabetes, fibromyalgia, body mass index, smoking) and RA disease characteristics (disease duration, disability and prednisone dose) were conducted. We further examined whether the relationship between disease activity and cognitive dysfunction varied based on patients age (<55 vs. >55 years) testing the moderating effect using a likelihood ratio test.

Results: There were 10,401 patients who met inclusion criteria of whom 863 (8%) reported cognitive dysfunction. Those who reported cognitive dysfunction were more likely to be women (83% vs. 73%, $p<0.001$), younger (62 vs. 64 years, $p<0.001$), disabled (24% vs. 8%, $p<0.001$), with moderate/high disease activity based on the CDAI (51% vs. 31%, $p<0.001$). In adjusted models, the likelihood of cognitive dysfunction increased with higher levels of disease activity in the total population (Table). The impact was more pronounced in those age <55 (p=0.007; Table).

	Total population*	Age <55**	Age ≥55**
Disease activity OR (95% CI)*			
Remission	1	1	1
Low	2.70 (2.11–3.45)	3.97 (2.34–6.75)	2.42 (1.84–3.20)
Moderate	3.56 (2.75–4.61)	5.93 (3.45–10.19)	3.01 (2.24–4.05)
High	3.90 (2.92–5.21)	7.92 (4.49–13.98)	2.90 (2.04–4.12)

*Adjusted for age, gender, race, disability, education, smoking status, body mass index, diabetes, fibromyalgia, disease duration and prednisone dose. **Adjusted for gender, race, disability, education, smoking status, body mass index, diabetes, fibromyalgia, disease duration and prednisone dose.

Conclusions: Increasing disease activity is associated with a higher likelihood of reporting cognitive disfunction. The effect was more pronounced in younger as opposed to older RA patients.

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SAT0105 SURVIVAL IN FIRST LINE OF BIOLOGIC AGENTS IN AN APULIAN COHORT OF RHEUMATOID ARTHRITIS PATIENTS WITH OCCULT HEPATITIS B VIRUS INFECTION

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Background: The occurrence of hepatitis B virus (HBV) infection may be a concern during the treatment of patients with Rheumatoid Arthritis (RA). We wondered whether a state of HBV occult infection (anti-HBcAg-pos, HBsAg-neg, HBV-DNA-neg) might influence the effectiveness of biological drugs in RA patients in real-world settings.

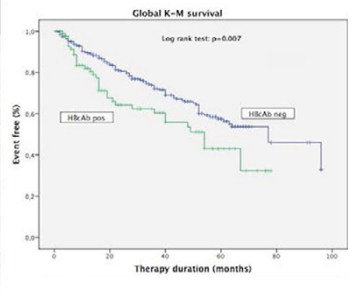
Objectives: We performed a retrospective analysis to evaluate the survival on first line biologic drug of RA Apulian patients with HBV occult infection.

Methods: We analyzed longitudinal data of 384 consecutive RA patients starting a first biological drug in a time frame from 1st January 2008 to 31st December 2014. Demographic and disease related characteristics were collected at baseline and at last observation visit. Baseline serological markers of HBV infection and causes of discontinuation of treatment were also recorded. Primary endpoint was the influence of anti-HBcAg-pos on drug survival, estimated by Kaplan-Meier life table analysis. Estimates hazard ratios (HRs) of drug discontinuation or achievement of Clinical Disease Activity Index (CDAI) based remission at last visit, adjusted for disease characteristics, biological drug class and anti-HBcAg-pos were computed by Cox-regression models.

Results: No baseline demographic and disease characteristics difference between anti-HBcAg-pos and anti-HBcAg-neg RA patients were detected, except for DAS28 that was significantly higher in anti-HBcAg-pos group. Drug survival rate was significantly lower in anti-HBcAg-pos (57.6%, median survival time (95% CI) 54 months (38–69)) than in anti-HBcAg-neg patients (67.8%, median survival time (95% CI) 77 months (59–94)). Median survival time for ineffectiveness was 15 months (12–17) for anti-HBcAg-pos and 24 months (18–30) for anti-HBcAg-neg patients (p=0.04). Cox regression models showed a significant association between anti-HBcAg-neg (HR 0.60, 0.39–0.92) or RF/ACPA-neg (HR 1.69, 1.16–2.46) and drug discontinuation, while co-therapy with MTX (HR 2.14, 1.01–4.58) or with steroids (HR 0.38, 0.16–0.91), and RF/ACPA neg (HR 0.45, 0.21–0.95) were independently associated with the achievement of CDAI based remission.

	All (nr. 384)	Anti-HBc neg (nr. 298)	Anti-HBc pos (nr. 86)	P
Age	59 ±10	59 ±10	57 ±12	ns
Female. nr (%)	290 (75)	229 (77)	61 (72)	ns
Disease duration	41 ±58	38 ±58	51 ± 60	ns
Comorbidities. nr (%)	263 (63)	132 (44)	28 (33)	ns
ESR-DAS28	4.5 ±1.2	4.4 ±1.1	4.8 ± 1.2	0.007
CDAI	20.3 ±11	20 ±10	21 ±11	ns
HAQ-DI	1.4 ±0.7	1.4 ±0.6	1.3 ± 0.7	ns
RF nr (%)	252 (66)	199 (67)	53 (62)	ns
Etanercept nr (%)	135 (35)	112 (38)	23 (27)	ns
TNFa mAb nr (%)	122 (32)	103 (35)	19 (22)	ns
Tocilizumab nr (%)	60 (16)	39 (13)	21 (25)	ns
Abatacept nr (%)	66 (17)	44 (15)	22 (26)	ns
Glucocorticoids nr (%)	304 (80)	235 (79)	69 (80)	ns
MTX nr (%)	323 (84)	262 (88)	61 (71)	ns

Values are the mean ± SD unless otherwise indicated. *28 joints Disease Activity Score; CDAI = Clinical Disease Activity Index; RF =Rheumatoid Factor; MTX =Methotrexate.



Conclusions: HBV occult infection seems to influence negatively the effectiveness