third trim. - 3.1[2.1; 4.0] and 1.7[1.1; 4.0], $p < 0.05$ in all cases. However, women with adherence $> 80\%$ were initially less active and NSAIDs were prescribed "on demand", which increased their compliance.

Conclusion: intake of ibuprofen in low doses does not affect the activity of AS. Due to the ongoing discussion about the effect of NSAIDs on neonatal outcomes, further international studies are required for development an optimal treatment regimen during pregnancy with a possible extension of the indications for the appointment of TNF inhibitors (BASDAI <4).

Disclosure of Interests: None declared.

DOI: 10.1136/annrheumdis-2021-eular.2463

AB0475

COMPARATIVE EFFECTIVENESS OF BIOLOGICAL DISEASE-MODIFYING ANTIRHEUMATIC DRUGS IN REAL CLINICAL PRACTICE ACCORDING TO THE MOSCOW UNIFIED ARTHRITIS REGISTER (MUAR)

E. Rozochkina¹, E. Koltsova², G. Lukina^{1,3}, E. Schmidt⁴, K. Lytkina⁵, A. Zagrebneva⁶, E. Zhilyaev^{7,8}, A.S. Loginov Moscow Clinical Scientific Center, Rheumatology, Moscow, Russian Federation; ²Research Institute of the Organization of health and healthcare management, Rheumatology, Moscow, Russian Federation; ³V.A. Nasonova Research Institute of Rheumatology, Rheumatology, Moscow, Russian Federation; ⁴N.I. Pirogov City Clinical Hospital 1, Rheumatology, Moscow, Russian Federation; ⁵City Clinical Hospital 4, Rheumatology, Moscow, Russian Federation; ⁶City Clinical Hospital 52, Rheumatology, Moscow, Russian Federation; ⁷Russian Medical Academy of Continuous Professional Education of the Ministry of Healthcare of the Russian Federation, Rheumatology, Moscow, Russian Federation; ⁸European Medical Center, Rheumatology, Moscow, Russian Federation

Background: This study is the first analysis of biological disease-modifying anti-rheumatic drugs (bDMARDs) for ankylosing spondylitis (AS) within the Moscow Unified Arthritis Register (MUAR).

Objectives: to compare the effectiveness of bDMARDs in patients with AS using data from the MUAR.

Methods: The analysis included the data of patients with AS who were included in the MUAR and received biological therapy for at least 6 months. The effectiveness of the drugs was assessed by the achieved values of the indices of diseases activity and its manifestations: ASDAS(C-RP), BASDAI, LEI, MASES, indicators of the functional ability of patients (BASFI, HAQ) at the last completed visit. Comparison of indicators between drugs was in a general linear model, adjusted for the identified confounders. The search for confounders was in 2 stages: first, by univariate analysis, were identified indicators significantly related to the achieved ASDAS. Then, within the multivariate general linear model, by backward stepwise selection were determinate variables significantly and independently associated with ASDAS.

Results: The current study included 363 episodes of treatment with bDMARDs in 361 patients. There were 240 men (66.5%). The average age of the included patients was 46.3 ± 11.2 , the age at the onset of the disease was 27.3 ± 11.4 . The average duration of a treatment episode until the patient was assessed 1135 ± 900 days. Significant differences of the values of ASDAS($p = 0.033$) and ESR ($p = 0.007$) between bDMARDs were revealed. In pairwise comparisons of the achieved ASDAS using the Sidak adjustment, demonstrated that the values on infliximab and adalimumab were significantly lower than on certolizumab pegol ($p = 0.009$ and $p = 0.041$, respectively). Also significantly higher ESR values on certolizumab compared to all other drugs ($p < 0.001$ for all) were found. There

Table 1. Achieved values of the indices of activity and functional ability against the background of treatment with bDMARDs.

	ASDAS(C-RP)		BASDAI		HAQ		BASFI	
	unadjusted	adjusted	unadjusted	adjusted	unadjusted	adjusted	unadjusted	adjusted
ADA	1,89 ± 0,89	1,54 ± 0,29	3,07 ± 1,61	2,89 ± 0,25	0,63 ± 0,42	0,60 ± 0,07	3,25 ± 2,02	3,09 ± 0,32
GOL	2,08 ± 0,99	2,22 ± 0,31	3,09 ± 1,96	3,44 ± 0,49	0,66 ± 0,61	0,78 ± 0,14	3,74 ± 2,93	4,00 ± 0,63
INF	1,57 ± 0,82	1,29 ± 0,32	2,64 ± 1,55	2,19 ± 0,38	0,56 ± 0,52	0,57 ± 0,11	2,81 ± 2,29	2,93 ± 0,49
ETA	1,96 ± 0,85	1,94 ± 0,24	3,19 ± 1,69	3,44 ± 0,19	0,65 ± 0,53	0,72 ± 0,06	3,39 ± 2,26	3,88 ± 0,24
CER	2,69 ± 1,03	2,95 ± 0,46	4,07 ± 2,28	3,65 ± 0,52	1,12 ± 0,82	0,84 ± 0,15	5,07 ± 2,95	4,19 ± 0,67
SEK	2,69 ± 1,31	1,66 ± 0,51	3,72 ± 2,22	3,71 ± 0,49	0,85 ± 0,47	0,85 ± 0,14	3,46 ± 2,13	3,46 ± 0,63

ADA – Adalimumab, GOL – Golimumab, INF – Infliximab, ETA – Etanercept, CER – Certolizumab pegol, SEK – Sekukinumab, ASDAS – Ankylosing Spondylitis Disease Activity Score, BASDAI Bath Ankylosing Spondylitis Disease Activity Index, BASFI – Bath Ankylosing Spondylitis Functional Index, HAQ – Health Assessment Questioner, C-RP – C-reactive protein.

were no statistically significant differences between the drugs for other studied parameters.

Conclusion: The studied bDMARDs (infliximab, adalimumab, etanercept, certolizumab pegol, golimumab, secukinumab) demonstrate generally similar clinical efficacy in real clinical practice. The effect of golimumab and sekukinumab which have been recently introduced into clinical practice doesn't differ significantly from the effect of TNF inhibitors which has been used for a long time.

Disclosure of Interests: None declared.

DOI: 10.1136/annrheumdis-2021-eular.2819

AB0476

VITAMIN D SERUM CONCENTRATION VARIES ACCORDING TO DISEASE ACTIVITY IN SPONDYLOARTHRITIS

M. Rato¹, F. Oliveira Pinheiro¹, S. Garcia¹, B. M. Fernandes¹, D. Fonseca², D. Santos Oliveira^{1,3}, A. Martins¹, F. R. Martins⁴, A. Bernardo¹, M. Bernardes^{1,5}, L. Costa¹. ¹Centro Hospitalar Universitário São João, Rheumatology, Porto, Portugal; ²Centro Hospitalar de Vila Nova de Gaia/Espinho, Rheumatology, Vila Nova de Gaia, Portugal; ³Faculdade de Medicina da Universidade do Porto - FMUP, Center for Health Technology and Services Research (CINTESIS), Porto, Portugal; ⁴Centro Hospitalar Universitário do Algarve - Faro, Rheumatology, Faro, Portugal; ⁵Faculdade de Medicina da Universidade do Porto - FMUP, Rheumatology, Porto, Portugal

Background: Several studies have shown dissimilar results for the relationship between serum 25-hydroxyvitamin D concentration (25-OH-D) and disease activity in spondyloarthritis (SpA).

Objectives: This study aims to assess whether vitamin D levels vary according to disease activity in patients with SpA before and after starting treatment with biologic disease-modifying anti-rheumatic drugs (bDMARDs).

Methods: An observational retrospective study was performed in SpA patients followed in the Rheumatology department of a tertiary university hospital. Demographic and clinical data were collected from the Rheumatic Diseases Portuguese Register (Reuma.pt). Patients were assessed for 25-OH-D levels before and after 6 months of treatment with the first bDMARD. Correlation between 25-OH-D levels and disease activity measured by Ankylosing Spondylitis Disease Activity Score (ASDAS) at baseline and after 6 months were assessed using student's t-test for two samples and one-way ANOVA and with post hoc tests for multiple comparisons.

Results: A total of 189 patients were included. Ninety-seven patients were females (51.3%). The mean age at diagnosis was 34.8 ± 11.2 years and the median disease duration at the start of the first bDMARD was 4.9 years (min: 0.1; max: 46.0). All patients fulfilled the ASAS criteria for SpA. Nonsteroidal anti-inflammatory drugs were used by 102 patients (54.0%) and conventional synthetic DMARDs by 69 patients (36.5%). At 6 months, 188 patients were treated with tumor necrosis factor inhibitors and one with interleukin-17 inhibitor. According to ASDAS criteria, at baseline 36.8% of patients had high disease activity and 59.5% had very high disease activity. After 6 months of treatment with bDMARD 14.7% of patients have inactive disease, 21.6% low disease activity, 36.3% high activity and 12.6% very high disease activity. The mean value of 25-OH-D at baseline was significantly lower in the group of patients with very high disease activity compared to the patients with high disease activity (21.9 ± 11.1 ng/ml vs 26.1 ± 11.6 ng/ml, $p = 0.02$). At 6 months of treatment the mean value of 25-OH-D in inactive, low, high and very high disease activity was 31.0 ± 17.1 ng/ml, 28.5 ± 11.2 ng/ml, 25.8 ± 10.8 ng/ml and 19.3 ± 9.5 ng/ml, respectively. There was a statistically significant difference between the groups, as determined by one-way ANOVA ($p = 0.001$). A post hoc Dunnett T3 test revealed that patients with very high disease activity have significantly lower mean 25-OH-D levels (19.29 ± 9.5) than patients with inactive disease (31.0 ± 17.1 , $p = 0.025$) and low activity (28.5 ± 11.2 , $p = 0.009$). Among the groups with high and very high disease activity, the significance is only marginal ($p = 0.068$).

Conclusion: Vitamin D serum concentration varies according to disease activity in SpA. In fact, SpA patients with lower levels of 25-OH-D are associated with higher rates of disease activity, even in patients treated with biologics agents. It is important to be aware of vitamin D level as it can play a role in the management and treatment of the disease, mainly in the most severe patients.

REFERENCES:

- [1] Zhao SZ, Thong D, Duffield S, Goodson N. Vitamin D Deficiency in Axial Spondyloarthritis is Associated With Higher Disease Activity. Arch Rheumatol. 2017 Mar 24;32(3):209-215. doi: 10.5606/ArchRheumatol.2017.6212. PMID: 30375524; PMCID: PMC6190948.

Disclosure of Interests: None declared.

DOI: 10.1136/annrheumdis-2021-eular.2921