national database and treated with bDMARD between June 2008 and July 2020. Demographic, clinical and laboratorial data (including 25-hydroxyvitamin D [25-OHvitD]) at baseline and disease activity measures at 6 and 12 months of treatment with the first bDMARD were collected. Correlations between variables were evaluated by Spearman rank test, Mann-Whitney U test was used to the comparison analysis between groups and univariate logistic regression was used in the prediction analysis.

Results: A total of 195 SpA patients were included: 103 (52.8%) females, 47 (24.1%) smokers and 91 (46.7%) HLA-B27 positive; 139 (71.3%) had Ankylosing Spondylitis, 18 (9.2%) had Inflammatory Bowel Disease Associated SpA and 38 (19.5%) had Undifferentiated SpA. At the time of the first bDMARD, the mean age was 43.5 years (± 9.6) and the median disease duration was 12.4 years (0.7–52.7). The mean ASDAS-CRP (Ankylosing Spondylitis Disease Activity Score with C-reactive protein) was 3.9 (± 0.8) and, in addition, 61 (31.3%) patients had 25-OHvitD levels below 30 ng/mL and 12 (6.2%) had 25-OHvitD levels below 20 ng/mL. Fifty-three patients (27.2%) were taking NSAIDs (nonsteroidal anti-inflammatory drugs), 77 (39.5%) were under csDMARDs (conventional synthetic disease-modifying antirheumatic drugs). Adalimumab (56%) and golimumab (33.3%) were the most frequently initiated bDMARDs in the first line.

There were no statistically significant correlations between baseline 25-OHvitD levels and ASDAS-CRP at 6 ($r=0.031$; $p=0.714$) and 12 months ($r=0.035$; $p=0.672$) of bDMARD.

In the subgroup analysis: there were no statistically significant differences in the response to bDMARD at 6 and 12 months evaluated by ASDAS response and ASAS 20, 40 and 70 responses according to the baseline 25-OHvitD levels (25-OHvitD <20 ng/mL vs ≥ 20 ng/mL; 25-OHvitD <30 ng/mL vs ≥ 30 ng/mL); and there were no statistically significant differences in the baseline 25-OHvitD levels at baseline according to the response to bDMARD at 6 and 12 months of bDMARD (ASDAS: no response vs clinically important improvement or major improvement; ASAS 20: no response vs response).

In the line of these previous results, baseline 25-OHvitD levels did not predict the ASDAS response at 6 (OR 0.97 [0.95–1.00], 95% CI) or 12 (OR 0.98 [0.95–1.01], 95% CI) months of bDMARD.

Conclusion: Despite some data that suggest that lower levels of 25-OHvitD may be associated with higher disease activity in SpA, our results failed to demonstrate that the baseline 25-OHvitD levels can be related or predict treatment response after 6 and/or 12 months of therapy with the first bDMARD in real-life SpA patients.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.997

AB0836

DIAGNOSIS VALUE OF INTERLEUKIN 17 IN SPONDYLOARTHRITIS

L. Kharrat¹, M. Slouma¹, A. Tezeghdenti², W. Dkhili², R. Dhahri¹, E. Ghazouani², I. Gharsallah¹, L. Metoui¹, B. Louzir¹. ¹Military Hospital of Instruction of Tunis, Rheumatology, Tunis, Tunisia; ²Military Hospital of Instruction of Tunis, Immunology, Tunis, Tunisia

Background: Interleukin 17 (IL-17) is pro-inflammatory cytokine that plays a crucial role in spondyloarthritis via the Th17/IL-17 axis. (1)

Objectives: We aimed to study the diagnosis value of IL-17 serum in spondyloarthritis.

Methods: We conducted a case-control study, including 104 subjects divided into 2 groups:

-G1: 52 patients meeting the Assessment of SpondyloArthritis International Society (ASAS) criteria for spondyloarthritis (SA)

-G2: 52 healthy controls matched for age and sex.

The IL-17 level was measured using Enzyme-linked immunosorbent assay (ELISA).

We performed a ROC analysis and computed the area under the curve (AUC) at IL-17 to assess the ability of IL-17 to diagnose SA.

Statistical analysis was performed using "IBM SPSS Statistics" software version 25.

Results: Eighty per cent of the patients were men ($n=41$). The mean age was 44.96 ± 13.09 years. The mean age at the onset of the disease was 35.07 ± 12.66 years. The disease duration was 9.25 ± 8.09 years. Axial radiographic spondyloarthritis and peripheral involvement were found in 53.8% ($n=28$) and 44.2% ($n=23$) of cases, respectively. Psoriasis was noted in 46% of cases ($n=24$). The mean ASDAS-CRP was 3.21 ± 1.64 .

IL-17 level was significantly higher in patients compared to healthy controls (92.76 ± 71.85 pg/mL and 2.67 ± 9.01 pg/mL, respectively, $p<0.0001$).

As shown in Figure 1, the AUC value to distinguish between spondyloarthritis and healthy control was 0.987 ($p<0.0001$). IL-17 cut-off was 13.79 pg/mL (Sensitivity= 94.2%, specificity=98.1%).

Conclusion: According to previous studies, our study showed that serum IL-17 level is significantly higher in SA patients compared to healthy controls (2).

Figure 1. AUC at IL-17 between SA patients and healthy controls 0.987 ($p<0.0001$)

Interestingly, IL-17 was able to distinguish between SA patients and healthy controls with a cut-off of 13.79 pg/mL. This finding suggests that IL-17 may be useful for the diagnosis of SA.

REFERENCES:

- [1] Ruiz de Morales JMG, Puig L, Daudén E, Cañete JD, Pablos JL, Martín AO, et al. Critical role of interleukin (IL)-17 in inflammatory and immune disorders: An updated review of the evidence focusing in controversies. *Autoimmun Rev.* janv 2020;19(1):102429.
- [2] Chen W-S, Chang Y-S, Lin K-C, Lai C-C, Wang S-H, Hsiao K-H, et al. Association of serum interleukin-17 and interleukin-23 levels with disease activity in Chinese patients with ankylosing spondylitis. *J Chin Med Assoc.* juill 2012;75(7):303-8.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.1020

AB0837

SERUM YKL-40 LEVELS IN PATIENTS WITH EARLY RHEUMATOID ARTHRITIS: RELATION TO DISEASE ACTIVITY AND JOINT DESTRUCTION

E. Aleksandrova¹, A. Novikov¹, E. Luchikhina², D. Karateev², G. Lukina³.

¹Moscow Clinical Scientific Center n.a. A.S. Loginov, Clinical Immunology,

Moscow, Russian Federation; ²Regional Research and Clinical Institute

(MONIKI), Department of Rheumatology, Moscow, Russian Federation;

³Moscow Clinical Scientific Center n.a. A.S. Loginov, Department of

Rheumatology, Moscow, Russian Federation

Background: YKL-40 (chitinase-3-like 1 protein, human cartilage glycoprotein 39) is one of the major proteins secreted locally in the arthritic joint by activated macrophages, chondrocytes, synoviocytes and neutrophils, YKL-40 an important marker for inflammation, cartilage remodelling and synovial hyperplasia is recognized as a possible auto-antigen in rheumatoid arthritis (RA).

Objectives: The aims of the study were to determine the serum level of YKL-40 in early RA and investigate his relationship with biomarkers of disease activity and joint destruction.

Methods: We studied 22 patients with early RA (ACR/EULAR 2010 classification criteria); 4 males, 18 females; median and interquartile range (25th–75th percentile) of age 55,0 (43,0–64,0) years, disease duration 7,0 (5,0–11,0) months, DAS28 4,9 (4,3–5,8); 86% IgM rheumatoid factor (IgM RF) +; 91% anti-cyclic citrullinated peptide antibody (anti-CCP) +. All patients were treated with methotrexate (MTX). Three (14 %) patients received low oral doses of steroids and intra-articular injections. The control group included 22 healthy donors (HC). Radiographs were scored according to the van der Heijde-modified Sharp score. YKL-40, matrix metalloproteinase-3 (MMP-3), anti-CCP were detected using commercially available enzyme-linked immunosorbent assays (ELISA). The serum levels of IgM RF, C-reactive protein (CRP), serum amyloid A (SAA) were measured by immunonephelometry.