- [1] Hasday et al. "Nocturnal increase of urinary uric acid: creatinine ration. A biological correlate of sleep-associated hypoxemia." *AM Rev Respir Dis* 1981, 135:534
- [2] Lavie, Lena. "Obstructive sleep apnoea syndrome-an oxidative stress disorder" *Sleep Medicine Reviews* 2003, 7:35¹
- [3] Roddy et al. "The Association of Gout with Sleep Disorders: a cross-sectional study in primary care." *BMC Musculoskeletal Disorders* 2013, 14:119
- [4] Sahebajani H. "Changes in urinary uric acid excretion in obstructive sleep apnea before and after therapy with nasal continuous positive airway pressure." *Chest* 1998; 113: 1604
- [5] Taheri et al. "Short Sleep Duration is Associated with Reduced Leptin, Elevated Ghrelin, and Increased Body Mass Index" *PLOS Medicine* 2004, 1:210

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.1369

AB1303-HPR

TIME UNTIL DIAGNOSIS IN RHEUMATOLOGICAL PRACTICE: RESULTS FROM A CROSS-SECTIONAL MIDDLE-EUROPEAN COHORT COMPARED TO DATA FROM A SYSTEMATIC LITERATURE REVIEW

R. Mc-Cutchan¹, S. Maier¹, V. Winkler¹, B. Gruber¹, M. Schirmer¹ on behalf of Rheumatology working group of diploma students, Innsbruck. ¹Medizinische Universität Innsbruck, Innsbruck, Austria

Background: The time from first symptom to diagnosis (= diagnostic delay) is considered as key factor for better outcome in many chronic inflammatory rheumatic diseases, especially for rheumatoid arthritis (RA) and vasculitides like giant cell arteritis (GCA). A longer diagnostic delay may cause pain, reduced functionality, reduced life-quality and increased morbidity, as well as structural damages of the organs linked with higher mortality. This retrospective study assessed the diagnostic delay in consecutive Middle-European outpatients and compared results with those of a systematic literature review (SLR).

Objectives: To compare disease-specific diagnostic delays of consecutive rheumatic patients with international data from a systematic literature review.

Methods: Charts of a single-centre cohort with consecutively recruited patients were retrospectively reviewed for patients' and diseases' characteristics at a Middle-European university outpatient clinic for rheumatology. A SLR was performed according to PRISMA guidelines.

Results: The average mean $\pm$ SD time from first symptom to established diagnosis was 7.9 ± 11.7 (0.02-56.7) years. Spondyloarthritis patients showed the longest diagnostic delay with 13.1 ± 14.2 (0.1-56.7) years, whereas polymyalgia rheumatica-patients had the shortest diagnostic delay with 1.5 ± 0.4 (0.3-18.0) months. In the SLR, most data for diagnostic delays are comparable to the Innsbruck cohort, but the diagnostic delay for psoriatic arthritis in Innsbruck is longer than in the Danish DANBIO registry ($p < 0.001$). Independent risk factors for prolonged diagnostic delays could not be identified.

Conclusion: For this Middle-European area, initiatives are justified especially to shorten diagnostic delays of SpA and PsA.

References:

- [1] O'Dell JR. Treating rheumatoid arthritis early: A window of opportunity? *Arthritis Rheum.* 2002;46:283-5.
- [2] Seo MR, Baek HL, Yoon HH, Ryu HJ, Choi HJ, Baek HJ, et al. Delayed diagnosis is linked to worse outcomes and unfavourable treatment responses in patients with axial spondyloarthritis. *Clin Rheumatol.* 2015;34:1397-405.
- [3] Diagnostic delay of more than 6 months contributes to poor radiographic and functional outcome in psoriatic arthritis. *Ann Rheum Dis.* 2015;74:1045-50.
- [4] Dejaco C, Brouwer E, Mason JC, Buttgerit F, Matteson EL, Dasgupta B. Giant cell arteritis and polymyalgia rheumatica: current challenges and opportunities. *Nat Rev Rheumatol.* Nature Publishing Group; 2017;13:578-92.

Acknowledgments: We acknowledge and thank all patients who could be recruited to the SolutionX project. Ethical vote was obtained by the local ethics committee of the Medical University of Innsbruck (AN2017-0041 370/4.18).

Disclosure of Interests: Rick Mc-Cutchan: None declared, Sarah Maier: None declared, Valentin Winkler: None declared, Bernhard Gruber: None declared, Michael Schirmer Grant/research support from: total <3000.- €, Speakers bureau: total <3000.- €

DOI: 10.1136/annrheumdis-2020-eular.3724

AB1304-HPR

KNOWLEDGE OF HIGH SCHOOL STUDENTS ABOUT RHEUMATIC DISEASES: EFFECT OF AN EDUCATIONAL SESSION JOINTLY PROVIDED BY PORTUGUESE EULAR ASSOCIATIONS

G. Pimentel¹, A. Marques^{2,3}, R. Ferreira^{2,3}, E. Mateus⁴, A. Pais⁵. ¹CHUC, Internal Medicine, Coimbra, Portugal; ²CHUC, Rheumatology, Coimbra, Portugal; ³UICISA:E, ESEnc, Coimbra, Portugal; ⁴Portuguese League Against

Rheumatic Diseases, Lisboa, Portugal; ⁵Portuguese Association of Childhood with Arthritis and Rheumatism, Lisboa, Portugal

Background: International studies have shown that the awareness and knowledge of the general population about rheumatic and musculoskeletal diseases (RMDs) is poor. This is even lower in the young population, which are also affected by these disease but do not have as much awareness campaigns as adult community. Their professors and primary health care professionals may also play here also a key role, promoting early detection of signs and interpretations of symptoms, thus avoiding late health care referrals and diagnosis. (Vlieland, 2016).

Objectives: To assess the knowledge of high school Portuguese students about the RMDs and raise awareness for RMDs in young people, their professors, vigilants, and primary care nurses, within the school environment.

Methods: A 1-hour educational session about RMDs was planned (with the inputs from members of the Portuguese EULAR Associations) and performed during school activities. The educational session started with a knowledge questionnaire about RMDs in a paper sheet (9 questions; Graph 1), repeated in the end. An interactive session, using slides, interactive questions (Sli.do®), and practical demonstrations to simulate RMD symptoms (e.g. stiffness and functional limitations) was then lead by a rheumatology nurse, with the testimony from a young patient representative. A primary care nurse assisted in order to be engaged and promote future sessions ("autonomously"). Change in knowledge was assessed with Wilcoxon-test and awareness was documented with "word clouds" (using Sli.do®).

Results: A total of 75 students participated in four sessions (mode=16 years). Half of students (52%) had never heard about RMDs. Knowledge increased significantly in all questions ($p < 0.001$; Graph 1). Figures 1 and 2 document the most common words representing what defines a RMD and what are the main symptoms, respectively.

Graph 1. Change in the percentage of correct answers before and after na educational session (n=75) (all $p < 0.001$)

Figure 1. "One to two words" to define "Rheumatic diseases" by college students (n=75) after an educational session

Figure 2. Symptoms that can indicate a rheumatic disease, according to college students (n=75) after an educational session

Conclusion: Our results confirm that awareness and knowledge about RMDs are very low high school students. The single and educational session was very well received by all students, and the knowledge increased. Post-educational feedback said that students especially liked the testimony of a peer. Other sessions are taking place in primary schools.

References:

- [1] Vlieland, T. P., et al. RMD Open, 2016;2:e000337. doi:10.1136/rmdopen-2016-000337

Acknowledgments: To European League Against Rheumatism for the founding provided through the campaign "Don't Delay, Connect Today".

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2020-eular.5043

AB1305-HPR IS BETTER AND SAFER TOFACITINIB AS A FIRST LINE OF TREATMENT IN PATIENTS WITH RHEUMATOID ARTHRITIS? – A COHORT STUDY

O. Valencia¹, M. Cabrera¹, F. Rodriguez², P. Santos-Moreno³. ¹Biomab - Center for Rheumatoid Arthritis, Data Administration, Bogota, Colombia; ²Biomab - Center for Rheumatoid Arthritis, Patients Education Program, Bogota, Colombia; ³Biomab - Center for Rheumatoid Arthritis, Rheumatology, Bogota, Colombia

Background: Tofacitinib is the first oral Janus Kinase inhibitor approved for the treatment of rheumatoid arthritis (RA); and although it is approved both after conventional treatment and after biological therapy, it is not well known its real-life effectiveness in both cases and if it is preferable to use it after cDMARDs or biologics.

Objectives: We compare the effectiveness and safety of Tofacitinib in patients with RA analyzing if better and safer Tofacitinib after cDMARDs or biologics.

Methods: A retrospective analysis of a real-world cohort of patients with RA, who were treated with Tofacitinib in last 3 years, as first line of treatment (T1) after failure with cDMARDs and second line of treatment after biologic drug failure (T2). The therapy was considered effective with the change from moderate-high disease activity to low disease activity or remission measured by DAS28, in those who met criteria of high adherence, without change or addition of other conventional DMARDs, without new dose or increase of dose of oral glucocorticoids. A logistic model of regression was performed to evaluate differences between T1 and T2, using as covariates sex, age, comorbidities, time of disease evolution, adverse events and other causes of discontinuation. Medication survival time and the main causes of suspension were measured. Mixed model regression and least-squared means were used to estimate the baseline changes and a Kaplan-Meier survival analysis to estimate time to remission and drug survival.

Results: 105 patients with RA were included (median age: 56.1 ± 11.7 years; 80.9% female, median disease duration 11.48 ± 10.1 years); 43% (45/105) of patients with positive rheumatoid factor and 73% (77/105) positive anti-citrulline antibodies. Regarding treatment 51% (54/105) used Tofacitinib as 1T, after failure to cDMARDs; on the other hand, Tofacitinib was used as 2T, after failure to biologics in 49% (51/105) of patients. DAS28 levels were reduced at 8, 16 and 24 weeks with statistical difference (p value 0.004, <0.0001, and <0.001,

respectively). HAQ-DI also reported reduction but without statistical difference. The use of Tofacitinib was more effective after failure to cDMARDs (p value 0.014) and patients with more than 3 years of disease (p value 0.04), a statistically better response. Also, corticoids use, positive RF, extended release tablet of tofacitinib reported better changes of DAS28 but without statistical significance. Patients with high disease activity treated with Tofacitinib 1T decreased from 30% at baseline to 19% at the last follow-up; patients in 2T way were in moderate activity of the disease in 57% at baseline and went to 37% in the last follow-up. There was an increase in patients who achieved remission in both groups, but higher in 1T where they went from 9% to 41%, while in 2T they went from 22% to 33% (p < 0.05). The survival rate of the medication was 1.7 years in 1T and 2.1 in 2T; in terms of time to remission, the use of Tofacitinib monotherapy presented statistical difference (p value <0.001). The main cause of suspension of treatment was therapeutic failure 12% (13/105), 9% in 1T (5/54) and 16% (8/51) in 2T (p <0.005). 6% of patients (6/105) presented suspension due to the occurrence of adverse events, 4% (2/54) in 1T and 8% (4/51) in 2T (p <0.005).

Conclusion: In patients with RA, the use of Tofacitinib as the first line of treatment (after failure to cDMARDs) is better in effectiveness and safer in comparison with its use as a second line of treatment (after biologics), with significant differences in the rates of therapeutic failure and occurrence of adverse events/reactions. On the other hand, concomitant corticoids use, positive RF, extended release tablet of Tofacitinib seem to increase the effectiveness of Tofacitinib in terms of DAS28 and HAQ-DI.

Disclosure of Interests: Omaira Valencia: None declared, Michael Cabrera: None declared, Fernando Rodriguez: None declared, Pedro Santos-Moreno Grant/research support from: I have received research grants from Abbvie, Biopas-UCB, Janssen, Novartis, Pfizer., Speakers bureau: I have been a speaker for Abbvie, Biopas-UCB, Janssen, Lilly, Novartis, Pfizer, Roche, Sanofi.

DOI: 10.1136/annrheumdis-2020-eular.6254

HPR Interventions (educational, physical, social and psychological)

AB1306-HPR THE EFFECTS OF CLINICAL PILATES EXERCISES IN PATIENTS WITH RHEUMATOID ARTHRITIS

S. Baglan Yentur¹, N. Atas², M. A. Ozturk², D. Oskay². ¹Firat University, Elazığ, Turkey; ²Gazi University, Ankara, Turkey

Background: Rheumatoid Arthritis (RA) is a rheumatic disease that may coexist many symptoms clinically. These clinical symptoms progress in a vicious cycle in many patients. Physical activity and exercise are known to improve many symptoms in RA patients.

Objectives: This study was designed to investigate the effects of clinical pilates exercises on fatigue, depression, aerobic capacity, pain, sleep quality and quality of life.

Methods: Thirty voluntary RA patients were included in this study. Patients were separated into three groups equally and each group was applied treatment for eight weeks. Clinical pilates exercises were practiced to the first group, aerobic exercises were practiced to the second group and combined training which was a combination of pilates exercises and aerobic exercises was performed to the third group. Fatigue, depression, aerobic capacity, pain, sleep quality and quality of life were evaluated by Fatigue Severity Scale (FSS), Beck Depression Inventory (BDI), Six minute walk test (6MWT), Short- Form McGill Pain Questionnaire (MPQ), Pittsburg Sleep Quality Index (PSQI) and Rheumatoid Arthritis Quality of Life (RAQoL), respectively.

Results: According to our results, statistically significant improvements were found for clinical pilates exercises on fatigue, depression, aerobic capacity and quality of life (p<0.05). Improvements in all parameters except from pain were concluded for aerobic exercises and combined training (p<0.05). Also, there was no statistically significant difference among the treatment groups in assessments (p>0.05).

Conclusion: Pilates exercises were found effective and safe for RA patients. Clinical pilates training may be as effective as aerobic exercises in patients with RA according to our study. Therefore, addition of clinical pilates exercises to the routine treatment of RA may enhance the success of rehabilitation.

References:

- Hegarty RS, Conner TS, Stebbings S, Trehan GJ. Feel the Fatigue and Be Active Anyway: Physical Activity on High-Fatigue Days Protects Adults With Arthritis From Decrements in Same-Day Positive Mood. *Arthritis care & research*. 2015;67(9):1230-6
- Løppenthin K, Esbensen BA, Jennum P, Østergaard M, Christensen JF, Thomsen T, et al. Effect of intermittent aerobic exercise on sleep quality and