To evaluate the effect of disease activity on accrual damage.

Methods: A retrospective study was carried out from January 2010 to December 2018. Clinical records of patients with SLE (ACR criteria 1982/97) were reviewed considering baseline visit as the first clinical or control visit of 2010. For subsequent visits, data were collected annually until 2018. SLE activity was defined for each visit according to GLADEL's definition: 1- Remission Without Treatment (RwT): SLEDAI 0, without prednisone or immunosuppressive drugs (IS); 2- Remission on Treatment (RoT): SLEDAI 0, prednisone up to 5mg/day or immunosuppressive drugs in maintenance doses; 3- LDAS (Low Disease Activity Status): SLEDAI ≤ 4 , prednisone up to 7.5mg/day and/or IS in maintenance doses; 4- Non-Optimal Activity Control (NOC): SLEDAI > 4 , prednisone > 7.5 mg/day and/or IS in induction dose. The use of hydroxychloroquine was allowed for all groups. For the analysis, patients who remained in remission (with and without treatment) or LDAS for at least 75% of the follow-up time were grouped and compared with patients who remained active during that same period. Demographic, laboratory, treatment related variables and death were studied. Accrual damage was assessed with SLICC / SDI. Patients with less than two annual visits were excluded.

Statistical analysis: descriptive measures, Test T, Mann Whitney, Chi2 Test, Fisher's exact test, bivariate correlation, logistic regression model with mixed effects.

Results: Two hundred eighty-five medical records were reviewed and 100 patients with SLE were included, 89% women, mean age at baseline visit 38.5 ± 12 years old and mean time of disease 9.3 ± 7.3 years. The average SLEDAI and SLICC/SDI baseline scores were 3.7 and 0.8 respectively. The SLICC/SDI score at last visit was 2.2 and the average SLICC/SDI change (Δ SLICC) compared to baseline visit score was 1.4 ± 1.6 .

The prevalence of patients who were in remission for at least 75% of the follow-up time was 38% [95% CI 26.6, 45.4]. NOC patients categorized at baseline visit had the highest Δ SLICC (p 0.0001). The Δ SLICC was significantly lower in patients who were at least 75% of the follow-up time in remission (p 0.01) or LDAS (p 0.01) compared to those with NOC. In the Logistic Regression Model, the chance of changing the SLICC/SDI score was 2.9 times higher for the NOC group than for RwT.

Conclusion: The frequency of remission in this cohort of patients with SLE was 38%.

Worse control of disease activity, was associated with higher accumulated damage.

Disclosure of Interests: None declared

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FRI0607-HPR FREQUENCY AND PATIENTS BELIEFS ON VACCINATION IN RHEUMATIC DISEASES

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Background: Infectious diseases are increased in patients with rheumatic disorders; vaccination improves morbidity and mortality

Objectives: The aim of this study was to describe the frequency of vaccination in patients with rheumatic disorders and to compare the results with those obtained in 2009 and 2013 in a similar population. We also identified factors leading to lack of vaccination and patients beliefs on vaccines.

Methods: Multicentric cross sectional study in patients with autoimmune diseases from external rheumatology offices. Evaluation of vaccination status and patients' knowledge about vaccines were studied. A comparative analysis was carried out with the series registered in 2009 and 2013 in a similar population.

Results: 179 patients (158 female, 88.3% and 21 male, 11.7%) were evaluated. Median age was 52 years. Main pathologies were: Rheumatoid Arthritis 65.9% (n:118), Systemic Lupus Erythematosus 11.7% (n:21), Systemic Sclerosis 3.9% (7), Sjogren Syndrome n = 3.4% (n:6), other diseases 15% (n: 27). Median disease duration: 8.87 years. Ninety three percent of patients (n:167) were taking immunomodulators and 36.8% (n: 66) were using oral corticosteroids (20mg/day or less); 26.8% patients (n: 48) were receiving biological therapies. Vaccination frequency in the population was: Influenza 82% (147); 13-valent conjugate pneumococcal 69.3% (124), 23-valent pneumococcal 64.2% (115) and hepatitis B 62% (111). Comparative with 2009 and 2013 series there was an increase in the rate of vaccinated patients: influenza (82% vs. 39,1% and 74,2% respectively), antineumococcal (64% vs. 17% and 29%) and hepatitis B (62% vs. 6,7% and 26,7%).

Reasons for non-vaccination were absence of medical indication (41% of patients for hepatitis B; 32% for 23-valent pneumococcal; 38% for 13-valent pneumococcal and 34% for influenza).

139 patients (77, 7%) knew the benefits of vaccines, 164 (91, 6%) thought vaccines are useful; 134 (74,9%) reported that vaccines may decrease dying probability, 155 (86,5%) thought that vaccines are effective to prevent diseases and 149 patients (83,2%) believed that they prevent serious infections. 71 patients (39%) believed that vaccines can lead to serious consequences and 99 (55,3%) that they are more likely to acquire infections than the rest of the population.

Conclusion: Frequency of vaccination has increased since 2009 but there is still misinformation regarding vaccines risks and benefits. Promotion and information is essential to improve adherence.

References:

- [1] 2019 update of EULAR recommendations for vaccination in adult patients with autoimmune inflammatory rheumatic diseases. Furer V, et al. Ann Rheum Dis 2020;79:39-52
- [2] Vaccines and Disease-Modifying Antirheumatic Drugs: Practical Implications for the Rheumatologist. Friedman MA et al. Rheum Dis Clin North Am. 2017 Feb; 43 (1):1-13.
- [3] Recommendations and barriers to vaccination in systemic lupus erythematosus. Garg M et al. Autoimmun Rev. 2018 Oct; 17 (10):990-1001.
- [4] Comparison of national clinical practice guidelines and recommendations on vaccination of adult patients with autoimmune rheumatic diseases. Papadopoulos D. et al. Rheumatol Int. 2014 Feb;34 (2):151-63.
- [5] Guías de recomendaciones de prevención de infecciones en pacientes que reciben modificadores de la respuesta biológica. Jordán R. Et al. Rev Arg Reumatol. 2014; 25 (2): 08-26.

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FRI0608-HPR SEVERITY AND PREDICTORS OF PAIN INTENSITY AND HAND DISABILITY IN PATIENTS WITH TRAPEZIOMETACARPAL OSTEOARTHRITIS

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Background: Trapeziometacarpal osteoarthritis (TMO) is one of the most prevalent and painful forms of hand osteoarthritis.¹ It limits thumb mobility,² reduces hand functions, and manual activities.¹ Yet, no study has exhaustively documented the characteristics of this pathology using a biopsychosocial approach (e.g., pain, disability, psychological well-being, pain-related catastrophic thinking, quality of life). Furthermore, radiographic TMO severity and symptomatology are only weakly to moderately correlated.^{3, 4} The extent to which biopsychosocial factors (e.g., pain duration, depression, education) contribute to interindividual variability in TMO pain and hand disability merits further investigation.

Objectives: This study aimed at 1) describing the pain experience of patients with trapeziometacarpal osteoarthritis (TMO) from a biopsychosocial perspective, and 2) identifying predictors of their pain intensity and hand disability.

Methods: A total of 227 TMO patients recruited from 16 healthcare institutions completed validated questionnaires assessing their biopsychosocial characteristics. The associations of pain severity and hand disability with various biopsychosocial characteristics were analyzed by linear regression.

Results: The participants' mean age was 62.6 ± 8.5 years and 78% were women. Their mean pain intensity on the average in the last seven days was 5.8 ± 2.1 while their hand disability scores averaged 45.4 ± 18.8 on the QuickDASH. In terms of health-related quality of life, the participants' scores on the physical and mental summary scales of the SF-12v2 were 41.0 ± 9.4 and 48.7 ± 9.7 respectively. Results of the multivariable linear regression analyses revealed that age, living condition, pain frequency, pain-related catastrophic thinking, and depression levels accounted for 43.3% of the variance in pain intensity while age, sex, pain intensity, pain-related catastrophic thinking, depression, level of education, employment status and living condition accounted for 60.6% of the variance in hand function.

Conclusion: This comprehensive study showed that patients with TMO experience pain of moderate to severe intensity which can affect various aspects

of their daily living and their physical health-related quality of life. Greater tendency to catastrophize in the face of pain and higher depression levels were associated with more severe pain suggesting that psychological interventions aiming at reducing these factors could be beneficial for some patients with TMO.

References:

- [1] Bijsterbosch J, Visser W, Kroon HM, Stamm T, Meulenbelt I, Huizinga TW, Kloppenburg M. Thumb base involvement in symptomatic hand osteoarthritis is associated with more pain and functional disability. *Annals of the rheumatic diseases*. 2010;69:585-587.
- [2] Gehrmann SV, Tang J, Li ZM, Goitz RJ, Windolf J, Kaufmann RA. Motion deficit of the thumb in CMC joint arthritis. *Journal of hand surgery*. 2010;35:1449-1453.
- [3] Botha-Scheepers S, Riyazi N, Watt I, Rosendaal FR, Slagboom E, Bellamy N, Breedveld FC, Kloppenburg M. Progression of hand osteoarthritis over 2 years: a clinical and radiological follow-up study. *Annals of the rheumatic diseases*. 2009;68:1260-1264.
- [4] Hwang RW, Ring D. Pain and disability related to osteoarthritis of the trapeziometacarpal joint. *J Hand Microsurg*. 2011;3:63-65.

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FRI0609-HPR NUTRIENTS INTAKE CONDITION RELATES TO MAINTENANCE LOW DISEASE ACTIVITY IN PATIENTS WITH RHEUMATOID ARTHRITIS DURING 6 YEARS: TOMORROW STUDY

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Background: We have previously reported that nutritional intake status might relate to disease activity (1). Nutritional survey on prospective cohort study in rheumatoid arthritis (RA) patients and information about relationship between nutritional intake status and disease activity was very limited.

Objectives: This study aimed to obtain data from a cohort study for new nutritional therapy in RA patients.

Methods: We used TOMORROW cohort study data which conducted from years of 2010 to 2020. Two hundred and eight RA patients, and 205 non-RA sex and age matched controls were investigated, and we analyzed data from 2011 to 2017. Nutritional intake status was compared between who maintain lower disease activity during 2011 to 2017 (LDA group) and being higher disease activity even once in 2011 to 2017 (non-LDA group). Disease activity was evaluated by DAS28-ESR in every year and nutritional intake status was surveyed by brief self-administered diet history questionnaire (BDHQ) in 2011 and 2017.

Results: In RA patients, the change value from 2011 to 2017 of iron (odds ratio; 2.37), thiamin (OR; 2.96) and folic acid (OR; 3.16) intake which adjusted by energy intake, age, rheumatoid factor and medication status were extracted as independent factors for maintain LDA by multivariate logistic regression. These nutrients intake in RA patients was significantly lower than control both in 2011 and 2017. In RA patients, iron and folic acid intake in LDA group was significantly lower than non-LDA group in 2011. Folic acid intake was increased in LDA group and decreased in non-LDA group over time, and these nutrients showed significant differences in change value between LDA group and non-LDA group ($p < 0.05$).

Conclusion: The overtime change value in iron, thiamin and folic acid related to maintain six years low disease activity in RA patients.

References:

- [1] Matsumoto Y, Sugioka Y, Tada M, Okano T, Mamoto K, Inui K, et al. Monounsaturated fatty acids might be key factors in the Mediterranean diet that suppress rheumatoid arthritis disease activity: The TOMORROW study. *Clinical Nutrition* 37:675-680, 2018

* $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$ t-test

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FRI0610-HPR B-ADRENORECEPTOR BLOCKING DRUGS ASSOCIATE WITH LOWER RISK OF KNEE OSTEOARTHRITIS AND KNEE PAIN CONSULTATIONS IN PRIMARY CARE: A PROPENSITY SCORE MATCHED COHORT STUDY USING THE CLINICAL PRACTICE RESEARCH DATALINK.

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Background: The pharmacologic management of OA is centred around optimising pain control but first-line analgesics only have modest efficacy¹. Findings from several studies suggest that β -adrenoreceptor blocking drugs (β -blockers) have anti-nociceptive effects^{2,3}. However, evidence for the benefits of β -blockers in the context of OA pain is scarce. We recently demonstrated, for the first time, an association between beta-blockers and lower pain severity, and less opioid analgesic use in a secondary analysis of data for community dwelling adults with large-joint lower OA⁴. This association, however, was not confirmed in a hospital-based study⁵.

Objectives: We examined [1] the association between β -blocker prescription and first primary care consultation for knee OA, hip OA, knee pain, and hip pain and [2] the classes of β -blocker drugs that reduce the risk of these outcomes.

Methods: This was a cohort study using data from the UK Clinical Practice Research Datalink. Participants aged ≥ 40 years, in receipt of ≥ 2 β -blocker prescriptions within 60 days were matched by age, sex, and propensity score (PS) for β -blocker prescription to one control using greedy nearest neighbour matching. Participants with chronic painful conditions, contra-indications to β -blockers,