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**Background:** Decrease in vitamin D levels in patients with systemic lupus erythematosus (SLE) arouses particular interest. Vitamin D levels and their correlation with bone mineral density (BMD) loss are still seen as contradictory.

**Objectives:** To study serum vitamin D levels in SLE women and to estimate their correlation with BMD and disease activity.

**Methods:** 101 SLE women and 30 individuals in a control group participated in the study. The activity of SLE was evaluated by SLEDAI. The average age of patients was  $47.12 \pm 0.14$  years, in the control group it was  $46.17 \pm 0.12$ . Serum levels of C-reactive protein (CRP) and 25-hydroxyvitamin D (25(OH)D) were measured in all participants. Changes in BMD of the lumbar spine and hip were determined by dual-energy X-ray densitometry.

**Results:** In patients with SLE, the average level of 25(OH)D equalled  $14.6 \pm 1.19$  ng/ml, and in the individuals from the control group, it was 1.9 times higher, constituting  $24.7 \pm 1.32$  ng/ml. In SLE women with normal BMD (T score  $> -1.0$  SD) vitamin D deficiency ( $< 20$  ng/ml) was detected in 18.3%. In the group with osteopenia (T-score from  $-1.0$  to  $-2.5$  SD), the proportion of individuals with vitamin D deficiency has increased to 26.7%. In women with osteoporosis (T-score  $\leq -2.5$  SD), vitamin D deficiency was found in 63.9%. In the group of patients with the maximum CRP level there were only 10% of persons with the optimal ( $> 30$  ng/ml) 25(OH)D level, 40% had insufficiency (20-30 ng/ml), while deficiency ( $< 20$  ng/ml) was detected in every second patient. Among patients with optimal CRP levels, only every fourth person was diagnosed with vitamin D deficiency, 10% of the individuals had vitamin D insufficiency, while 65% had optimal vitamin D levels. Decrease in vitamin D level was closely associated with SLE activity revealed by SLEDAI ( $r = -0.44$ ;  $p < 0.05$ ).

**Conclusion:** The average vitamin D level in SLE women is likely to be lower than that in the control group. Decrease in vitamin D levels was associated with BMD loss and high inflammatory process as well as the disease activity according to CRP and SLEDAI.

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**Acknowledgements:** NIL.

**Disclosure of Interests:** None Declared.

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#### AB1837-HPR THE NON-INFLAMMATORY RHEUMATIC DISEASES AND CARDIOVASCULAR RISK: THE UNKNOWN COMORBIDITY

**Keywords:** Cardiovascular disease, Osteoarthritis, Ultrasound

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**Background:** Several factors were associated with non-inflammatory rheumatic diseases such as diabetes and overweight. As far as we know, no previous research has studied cardiovascular risk in this population. For this goal, we used the carotid intima-media thickness (cIMT) screening as a relevant tool for CV risk assessment.

**Objectives:** This study mainly aimed to determine the importance of CV risk in non-inflammatory rheumatic diseases.

**Methods:** The present study is a study conducted on Tunisian non-inflammatory rheumatism patients in the rheumatology department. We collected the characteristics of the patients and those of the disease. The CV risk was assessed using the measurement of cIMT. According to the American Society of Echocardiography guidelines, the cIMT thickness was measured using high-resolution B-mode carotid US with a Philips machine with the patient in the supine position. The cIMT was measured using the two inner layers of the common carotid artery and an increased IMT was defined as  $\geq 0.09$  cm.

**Results:** Fifty patients were collected, of which 82% were women. 64% of them were followed for knee osteoarthritis, the rest were chronic low back pain patients. The mean age was  $53 \pm 11.08$  years. 10% of patients were active smokers. Two percent were hypertensive and 4% were diabetics. The average BMI was  $28.1 \pm 4.5$  kg/m<sup>2</sup>. It was greater than 25 kg/m<sup>2</sup> in 76% of them. [cholesterol] was  $4.9 \pm 0.9$  mmol/l. 48.9% had a high rate. [Cholesterol HDL] was  $1.1 \pm 0.2$  mmol/l. The mean [cholesterol LDL] was  $3.3 \pm 0.8$  mmol/l. [triglyceride] was  $1.3 \pm 0.6$  mmol/l. The mean IMT in the left common carotid (LCC) was  $0.06 \pm 0.02$ , in the left internal carotid (LIC) was  $0.06 \pm 0.01$ , in the left external carotid (LEC) was  $0.05 \pm 0.01$ . The mean IMT in the right common carotid (RCC),  $0.06 \pm 0.01$  in the right internal carotid (RIC), and  $0.05 \pm 0.01$  in the right external carotid (REC). Thirty six percent had an atheroma plaque. Twenty six percent had a high CV risk according to the IMT. There was no correlation in our series between diabetes, high blood pressure, smoking, BMI, and high CV risk  $p=1$ ;  $p=1$ , and  $p=0.5$ , respectively.

**Conclusion:** While the absence of systemic inflammation in non-inflammatory osteoarticular diseases, the cardiovascular risk is higher in our study. Therefore, cardiovascular risk screening should not be limited to chronic inflammatory rheumatism.

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#### HPR Epidemiology and public health (including prevention)

#### AB1838-HPR THE TYPE AND THE EFFECT OF PHYSICAL ACTIVITY ON QUALITY OF LIFE AND FATIGUE IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS IN GREECE: A CROSS-SECTIONAL STUDY

**Keywords:** Systemic lupus erythematosus, Quality of life, Epidemiology

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**Background:** Systemic Lupus Erythematosus (SLE) is an autoimmune disease with severe symptoms, such as fatigue and has a high impact on patient's quality of life.

**Objectives:** The aim of this study was to determine the rate, the type, and the effect of physical activity (P.A.), and exercise in patients with SLE on quality of life and fatigue in Greece.

**Methods:** Three questionnaires were used to measure quality of life (SF-36), fatigue (FSS), and P.A. (mIPAQ). 101 patients with SLE from Greece answered about their personal choices. For statistics the IBM SPSS 25 was used for the statistical analysis. Descriptive analysis conducted to describe quantitative variables of interests. Data normality was verified from Kolmogorov-Smirnov test, and Pearson Correlation test was performed to determine the relationship between P.A. and QoL and Fatigue.

**Results:** The results showed that the sample average for QoL was  $48.3 (\pm 19.3)$ , for Fatigue  $41.73 (\pm 7.2)$ . The total score of P.A. was  $1603.79 (\pm 1695.8)$  METs. Furthermore, for vigorous P.A. was  $557.79 (\pm 987.6)$  METs, for moderate P.A.  $824.65 (\pm 811.6)$  METs, and for low P.A.  $239.87 (\pm 405)$  METs. The most common type of P.A. was housekeeping and cleaning for 74% of the sample, and even thought it is not considered as P.A. activity there was an option. A high average (50,5%) of the sample was presented by patients who chose to remain seated during the day. Positive correlation between P.A. and QoL was found ( $R=,385$ ,  $P<,01$ ). Negative correlation between P.A. and Fatigue was also found ( $R=,384$ ,  $P<,01$ ).

**Conclusion:** The conclusions were that the patients with SLE in Greece do not perform high level of P.A. and exercise. The moderate level of P.A. was more likely activities of day living, that are classed as P.A., than exercise. Furthermore, the sample choose a sedentary lifestyle, although correlation between P.A. and QoL and Fatigue in patients with S.L.E. was found.

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**Acknowledgements:** NIL.

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#### AB1839-HPR PERINATAL GRIEF IN WOMEN WITH AUTOIMMUNE RHEUMATIC DISEASES

**Keywords:** Mental health, Quality of life, Pregnancy and reproduction

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**Background:** Perinatal loss (PL), defined as a loss from any gestational age or in the neonatal period [1] lead women to the process of grieving. Perinatal Grief (PG) involves suffering and reaction such as sadness, disbelief and anger [2]. PL and PG symptoms affect many women around the world; women with autoimmune rheumatic diseases (ARDs) have greater risk of PL. The Perinatal Grief Scale (PGS) can help health providers prevent complicated grief in their patients [3].

**Objectives:** Determine which PL and sociodemographic variables are associated factors to a complicated grief in women with ARDs.

**Methods:** Descriptive, cross-sectional, comparative study at the Hospital Universitario "Dr. José Eleuterio González" in México. We included women from the Pregnancy and Rheumatic Diseases Clinic (CEER) that answer a virtual survey with the PGS. The demographic, ARD and PL data were obtained from the clinical records. For the control group, women without ARD were invited to fill a virtual survey with the PGS, sociodemographic and PL data. The PGS is a Likert-type scale that consists of 27 items with four response options. The questions are distributed in four subscales: active grief (10 items), guilt (8 items), depression (6 items), acceptance (3 items). Scores greater than 50 points suggests a complicated grief comorbidity.

The Kolmogorov-Smirnov test was used to determine normality; to analyze the differences between groups, Mann-Whitney U, Chi-square tests and T-test were employed. A  $p < 0.05$  was considered statistically significant. The statistical analysis was performed with the statistical program SPSS version 25.

**Results:** A total of 50 women were included: 25 with ARD and 25 without ARD. The median age for the group with ARD was 42 (38.5-51) and 34 (26-42.5) for the without ARD group. In the ARD group the most frequent diagnosis were systemic lupus erythematosus (7/14%), rheumatoid arthritis (6/12%) and Antiphospholipid Syndrome (4/8%). For the PGS, twenty (40%) of the 50 women got a score  $>50$ ; 11 (55%) were women without ARD and 9(45%) have ARD. The PL, suffered by these 20 women were 18 during the pregnancy (17/85% on the first trimester and 1/5% on the second trimester) and 2 (10%) after birth. No statistically differences were found in the total score and subscales of the PGS between groups. The sociodemographic and PL data and the PGS score for both groups are included in **table 1**.

**Conclusion:** Even though there were no significant differences between groups; we hypothesize that the greater number of PL in women with ARD serves as a protective factor and prevents that the PG evolve to a complicated grief. On the other hand, having the PL during the first trimester of the pregnancy can be a risk factor for complicated grief. Our limitation was the sample size for both groups.

#### REFERENCES:

- [1] Côté-Arsenault D and Denney-Loelsch E (2016) "Have no regrets": Parents' experiences and developmental task in pregnancy with lethal fetal diagnosis. *Social Sciences and Medicine* 154, 100–109.
- [2] Bonanno GA and Kaltman S (2001) The varieties of grief experience. *Clinical Psychology Review* 21, 705–734.
- [3] Mota González C, Calleja Bello N, Aldana Calva E, Gómez López ME, Sánchez Pichardo MA. Escala de duelo perinatal: validación en mujeres mexicanas con pérdida gestacional. *Revista latinoamericana de psicología*. 2011 Sep;43(3):419-28.

**Table 1. Clinical characterization**

	Patients with ARD N=25	Patients without ARD N=25	P=0.05
<b>Years of education</b>			0.114
>9 years	21 (84%)	15 (60%)	
<9 years	4 (16%)	10 (40%)	
<b>Marital Status</b>			0.225
Single	2 (8%)	2 (8%)	
Married/Common law	20 (80%)	15 (60%)	
Divorced	3 (12%)	8 (32%)	
<b>Perinatal Losses</b>			0.387
1	13 (52%)	17 (68%)	
>1	12 (48%)	3 (32%)	
<b>Number of pregnancies, median (IQR)</b>	4 (2.5-5)	3 (2-3.5)	0.38
<b>Number of living children, median (IQR)</b>	2 (1-3)	1 (0.5-2)	0.123
<b>PGS score, median (IQR)</b>	43(37.5-60.0)	46 (39.5-62.5)	0.587
PGS active grief subscale	13 (10-18)	14 (12-18.5)	0.355
PGS depression subscale	12 (10-19)	12 (10-22)	0.782
PGS guilt subscale	12 (9-18.5)	12 (8-17)	0.815
PGS acceptance subscale	6 (6-8)	7 (6-8)	0.347

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## Clinical cases

### AB1847 ANTI-MYELOPEROXIDASE ANTIBODY-POSITIVE GRANULOMATOSIS WITH POLYANGIITIS MIMICKING MUCOSAL LEISHMANIASIS: A RARE CASE REPORT

**Keywords:** Autoantibodies, Descriptive Studies, Vasculitis

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**Background:** Granulomatosis with polyangiitis (GPA) features necrotizing granulomatous inflammation of the upper and lower respiratory tracts, with vasculitis of small- and medium-sized vessels [1]. Anti-proteinase 3 antibodies (PR3-ANCA) are found in the majority of cases, yet anti-myeloperoxidase (MPO-ANCA) may be identified in approximately 10% of patients with GPA [2, 3]. One of the differential diagnoses is mucosal leishmaniasis, especially in patients from endemic regions. Atypical presentations of GPA may delay diagnosis.

**Objectives:** To report a case of a female patient previously diagnosed with and treated for mucosal leishmaniasis due to upper respiratory tract lesions. As the symptoms returned alongside arthritis, further investigation concluded to a diagnosis of anti-myeloperoxidase-positive GPA.

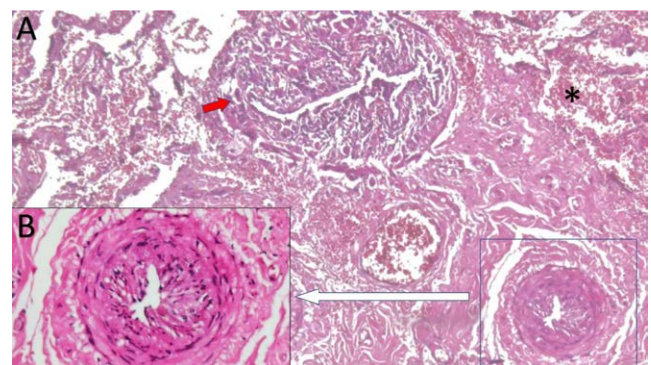
**Methods:** Case report and discussion.

**Results:** A 51-year-old woman from Brazil presented in 2021 with epistaxis and joint pain. The patient reported a prior history of recurring bilateral epistaxis and maxillary pain since 2008. At that time, she had a wide nasal septal perforation. CT scan of the sinuses showed maxillary and ethmoidal sinusopathy. A nasal biopsy showed epithelioid granulomas without amastigotes, but the patient had a 25mm Montenegro skin test (strongly positive). Syphilis, hepatitis B, hepatitis C and HIV screenings and acid-fast bacilli smear were negatives. As Brazil is an endemic region for leishmaniasis, a presumptive diagnosis of mucosal leishmaniasis was made and the patient was appropriately treated. In 2016, she was lost to follow-up. In 2021, she returned with fever, epistaxis, important unspecified weight loss and arthralgia with edema in ankles, distal interphalangeal joints, metacarpophalangeal joints and wrists. Blood screening revealed an RCP of 9.5 and an ESR of 28. Urine tests were normal. A thoracic CT scan showed multiple lung nodular formations, including a subpleural nodule in the anterior lower right lobe, with a size of 3.8 x 3.1 x 2.9 cm. Lung histopathology revealed foci of poorly formed, non-necrotic granulomas in centrilobular parenchyma and angiitis in small-caliber arteries (image 1). Autoimmune screening revealed positive MPO-ANCA superior to 1/80 and negative c-ANCA, rheumatoid factor and anti-CCP. Thus, a diagnosis of GPA was made, and oral methotrexate 20mg weekly was started. Improvement of arthritis could be observed in four weeks.

**Conclusion:** GPA may present upper respiratory tract symptoms, and is considered a differential diagnosis for mucosal leishmaniasis [4]. Recurrence of the symptoms in a patient treated for mucosal leishmaniasis should prone further investigation for other conditions. The renal system was spared in our patient, however nasal septal involvement, prominent sinusopathy, joint symptoms and pulmonary typical findings strongly favored the hypothesis of GPA. A positive MPO-ANCA and good therapeutic response following methotrexate strengthened the certainty of the diagnosis. Physicians should be aware of GPA as a differential diagnosis for mucosal leishmaniasis and recognize its MPO-ANCA-positive presentation.

#### REFERENCES:

- [1] Comarmond C, Cacoub P. Granulomatosis with polyangiitis (Wegener): clinical aspects and treatment. *Autoimmunity reviews*. 2014 Nov 1;13(11):1121-5.
- [2] Puéchal X. Granulomatosis with polyangiitis (Wegener's). *Joint bone spine*. 2020 Dec 1;87(6):572-8.
- [3] Bosch X, Guilabert A, Font J. Antineutrophil cytoplasmic antibodies. *The Lancet*. 2006 Jul 29;368(9533):404-18
- [4] Rojas-James J, Hugo Rojas Figueroa V, Corcuera-Ciudad R, Arenas J, García-Reynoso J. Wegener's granulomatosis and differential diagnosis of mucosal leishmaniasis. *Clinical Case Reports*. 2021 Jun;9(6):e04280



**Image 1:** H&E 100x (A) and 200x (B) section of pulmonary nodule showing lymphocytic bronchiolitis (A, red arrow) and angiitis, featuring sub-intimal thickening with neutrophilic exudate, edema and segmental destruction of internal elastic lamina (B – 200x, white arrow). Alveolar hemorrhage is seen in (\*).

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### AB1848 ARTIFICIAL INTELLIGENCE IN THE CLINICAL SETTING OF THE RHEUMATIC DISEASES; A SYSTEMATIC REVIEW OF THE LITERATURE

**Keywords:** Systematic review, Artificial Intelligence