patients with primary APS, 54 patients with positive aPL serology not meeting clinical criteria for APS and 326 healthy controls adjusted by the month of vitamin D analysis. We considered 30 ng/ml and 10 ng/ml as the thresholds for vitamin D insufficiency and deficiency, respectively.
Results: Median levels of vitamin D were similar in the three groups: 21 (range 5–69) in primary APS, 25 (4–50) in the aPL-positive group, and 21 (4–105) in controls. Overall, 53.9% of measurements were performed during the sunny season (April to September). Ten percent of patients with primary APS were males, versus 16% in the aPL serology group and 26% among healthy controls (p=0.007). Mean age was 46±15 in primary APS, 49±17 in the aPL-positive group and 53±10 in the control group (p<0.001). Regarding vitamin D insufficiency, 82% of APS patients had levels of vitamin D (<30 ng/ml) versus 70% and 72% of patients with aPL serology and controls, respectively (p=0.168). When analyzing the prevalence of vitamin D deficiency (<10 ng/ml), we found significant differences across the groups: 16.2% in patients with primary APS, 11.1% in patients with positive serology and only 4.9% in healthy controls (p=0.002). There was no significant association between insufficient levels of vitamin D and the presence of thrombotic or obstetric events. Nevertheless, we found a trend for the presence of more thrombotic events in patients with vitamin D deficiency (p=0.097). Regarding the immunological profile, we found no association between vitamin D and either the number of positive antibodies or their serological evolution. However, we found an association between insufficient levels of vitamin D and the presence of lupus anticoagulant (54.7% vs 18.2%, p=0.047)
Conclusions: More than 80% of patients with primary APS have insufficient levels of vitamin D and 16% of them have very low levels of vitamin D.
Primary APS patients show a higher frequency of vitamin D deficiency than healthy controls.
Patients with vitamin D insufficiency have more commonly positivity for lupus anticoagulant.
Disclosure of Interest: None declared
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AB0512 EPIDEMIOLOGICAL, CLINICAL AND IMMUNOLOGICAL CHARACTERISTICS OF ANTIPHOSPHOLIPID SYNDROME: STUDY OF 170 PATIENTS

L. Riancho-Zarrabeitia, S. García-Canale, M. Cubería, G. Daroca, M. López-Hoyos, P. Muñoz, M. Agudo, V. Martínez-Taboada. *Hospital Universitario Marqués de Valdecilla, Santander, Spain*

Background: Antiphospholipid syndrome (APS) is an autoimmune disease defined by the presence of antiphospholipid antibodies (aPL) and thrombosis and/or pregnancy morbidity. Although thrombotic and obstetric APS are considered the same disorder, there are pathogenetic and clinical differences between them.
Objectives: To describe the epidemiological, clinical and immunological characteristics of a cohort of APS patients from a defined population and to study the differences between thrombotic, obstetric and mixed APS.
Methods: Retrospective study including patients attending the rheumatology and the obstetric clinics of a tertiary facility in Northern Spain. All patients met APS classification criteria.
Results: We included 84 patients with thrombotic APS, 76 with obstetric APS and 10 with mixed APS. Main demographical characteristics are showed in table. There were differences in the age of discovery a positive serology (46±15 yr in thrombotic APS, 36±8 yr in obstetric, and 36±14 in mixed APS). Moreover, the prevalence of systemic lupus erythematosus (SLE) was higher in patients with thrombotic and mixed APS (26% and 30% vs 5% in obstetric APS, p=0.001). Anticardiolipin antibodies were, overall, the most frequently positive. Lupus anticoagulant was significantly more common in patients with thrombotic and mixed APS (70% and 71% vs 30% in obstetric APS, p=0.002). We found no differences in the load of antibodies between the three groups. Regarding traditional cardiovascular risk factors (CVRF), tobacco use was the most common, followed by hypertension and dyslipidemia. The last two factors were more frequent in patients with thrombotic and mixed APS than in those with obstetric APS (p<0.001). As expected, treatment with heparin was more frequent in obstetric and mixed APS, while oral anticoagulants were more frequently used in thrombotic APS. Antimalarial drugs were less frequently used in obstetric APS (17% vs 37% and 30%, p=0.020), probably due to a lower prevalence of lupus in this group.

	Total 170	Thrombotic APS 84	Obstetric APS 76	Mixed APS 10	P
Age (yr), mean ± SD	41,2±13,7	46.5±15.5	35.9±8.1	36.5±14.4	<0.001
SLE, n (%)	29 (17)	22 (26)	4 (5)	3 (30)	0.001
Load of antibodies				0.201	
– 1	63 (37)	24 (29)	34 (45)	5 (50)	
– 2	68 (40)	37 (44)	28 (37)	3 (30)	
– 3	38 (22)	23 (27)	13 (17)	2 (20)	
aCL	130 (77)	67 (80)	54 (72)	9 (90)	0.306
aB2Gp1	108 (64)	56 (67)	49 (65)	3 (30)	0.070
LA	53 (58)	40 (70)	8 (30)	5 (71)	0.002
Family history of thrombosis, n (%)	21 (19)	14 (29)	4 (7)	3 (50)	0.011
Traditional CV risk factors, n (%)					
Tobacco use	69 (41)	37 (44)	28 (37)	4 (40)	0.650
Hypertension	55 (32)	41 (49)	10 (13)	4 (40)	<0.001
Dyslipidemia	48 (28)	39 (46)	5 (7)	4 (40)	<0.001
Diabetes mellitas	8 (5)	4 (5)	4 (5)	0	0.761
Previous treatment, n (%)					
Heparin	88 (52)	28 (33)	54 (72)	6 (60)	<0.001
Oral anticoagulants	71 (42)	62 (74)	3 (4)	6 (60)	<0.001
Antiplatelet therapy	145 (86)	63 (76)	74 (97)	8 (80)	<0.001
Corticoids	5 (3)	5 (6)	0	0	0.072
Antimalarials	47 (28)	31 (37)	13 (17)	3 (30)	0.020
Immunosuppressants	5 (3)	4 (5)	1 (1)	0	0.371

Conclusions: In our cohort, patients with thrombotic or mixed APS have a higher frequency of SLE than patients with obstetric APS. Positivity for lupus anticoagulant is more common in patients with thrombotic or mixed APS. Regarding traditional CVRF, hypertension and dislypidemia are more common in patients with thrombotic or mixed APS.
Disclosure of Interest: None declared
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AB0513 FATIGUE IN CHINESE PATIENTS WITH PRIMARY SJÖGREN'S SYNDROME: A CROSS SECTIONAL STUDY

L. Li[1], Y. Cui[1], S. Chen[1], Q. Zhao[1], L. Li[2], Z. Gu[1]. *[1]Department of Rheumatology, Affiliated Hospital of Nantong University; [2]School of Nursing of Nantong University, Nantong, China*

Background: Primary Sjögren's syndrome (pSS) is the second most common systemic autoimmune disease, with a female-male ratio of 9:1, and characterized by sicca symptoms of the eyes and mouth, including joint pains and multi-system involvement. pSS affects patients' health-related quality of life (QoL), mental status and relationships with family. In pSS patients, symptoms such as fatigue, depression, arthralgia, fibromyalgia and general loss of well-being are commonly reported. Among them, fatigue is the most common problem that includes physical and mental fatigue, it can be as disabling as pain, which is difficult to manage and has a notable impact on QoL. Fatigue is a tiredness which may be mental, physical, or both, and that results in an inability to function at normal performance levels. However, the underlying pathophysiological mechanisms of fatigue remain unclear. A number of studies have reported the association of fatigue with Primary Sjögren's syndrome (pSS), whereas, because of the small sample size of pSS patients, we still lack large sample studies to find the relationship between pSS and fatigue.
Objectives: To investigate the relationship of fatigue severity to other clinical features in primary Sjögren's syndrome (pSS) and to identify factors contributing to the physical and mental aspects of fatigue in Chinese patients.
Methods: Sixty-seven consecutive patients with PSS according to the American-European Consensus group (AEGG) criteria were included. Demographic, clinical and biological characteristics for all patients were collected. The Fatigue Severity Scale (FSS), Profile of Fatigue (ProF), Visual analogue scale, Hospital Anxiety and Depression Scale (HADS), OHIP-14 Scale, MDADI Scale and PSQI Scale were adopted to assess fatigue, depression, anxiety, xerostomia, xerophthalmia and sleep disturbances. Associations with fatigue were compared using multivariate regression.
Results: 94% of our patients were women. The mean age of patients was 51.13±13.23 years, and the mean disease duration was 4.12±4.49 years. The mean oral dryness was 51±17.82, and the mean ocular dryness was 33.56±26.3. Abnormal fatigue, defined as an FSS score >or=4, was present in 64% of the patients. Dry symptoms, low educational level, Pain and depression had a negative impact on fatigue scores. The regression models explained that Pain and depression were the strongest predictors of fatigue according to the FSS.
Conclusions: Fatigue is a tiredness which may be mental, physical, or both, and that results in an inability to function at normal performance levels. However, the underlying pathophysiological mechanisms of fatigue remain unclear. From our study, we found that psychosocial variables are determinants of fatigue, and fatigue is associated with depression, but depression is not the primary cause of fatigue in primary SS. Therefore, the investigation of the pathophysiologic correlates of physical and mental aspects of fatigue is needed to guide the development of more effective interventions.
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AB0514 THE RELATIONSHIP BETWEEN SERUM LEVEL OF C-TERMINAL TELOPEPTIDE OF TYPE I COLLAGEN WITH COURSE OF SYSTEMIC LUPUS ERYTHEMATOSUS AND STRUCTURAL AND FUNCTIONAL STATE OF BONE TISSUE

S. Shevchuk, L. Denyschych, L. Marynych. *National Pirogov Memorial Medical University, Vinnytsya, Ukraine, Vinnytsya, Ukraine*

Background: It is well known, that the incidence of osteoporosis in patients with systemic lupus erythematosus (SLE) is higher compared to the population level. Its severity in patients with SLE is associated with a number of factors: female gender, disease activity, damage index, glucocorticoid therapy etc. One of metabolic factors indicating the reducing bone mineral density (BMD) is the level

of C-terminal telopeptide of type I collagen (CTX). Its place in the formation of osteoporosis in SLE patients is poorly understood, as well as its relationship with the course of the disease.
Objectives: The aim of study was to determine serum level of CTX in the SLE patients and its relationship with structural and functional state of bone tissue, course of the disease.
Methods: The study involved 58 SLE women (study group) and 29 healthy individuals (control group) representative by age and gender. The mean age of patients was 45,11±1,03 years. For every patient data were recorded on age, body mass index (BMI), chronic SLE damage (SLICC/ACR DI) and disease activity score (SLEDAI), cumulative glucocorticoid dose, serum concentrations of interleukin-6 (IL-6) and C-reactive protein (CRP), bone resorption marker (CTX). Serum concentration of CTX was determined using ELISA test system "Nordic Bioscience Diagnostics A/S". Changes in BMD of the lumbar spine and proximal hip were determined by Dual-energy X-ray absorptiometry.
Results: It was established, that in patients with SLE serum level of C-terminal telopeptide of type I collagen was 1,15±0,03 ng/ml, while in the control group – 0,83±0,03 ng/ml, or was higher more than 19,0%. Violation of bone remodeling in patients with SLE was associated with reduced BMD, increased incidence of osteopenia and osteoporosis. Thus, the mean concentration of CTX in patients with osteoporosis was 1,63±0,04 ng/ml, while in patients with normal bone – 1,0±0,03 ng/ml. In SLE patients with osteopenia the level of C-terminal telopeptide of type I collagen was 1,23±0,04 ng/ml (higher more than 23% compared with the control group). Increased CTX practically had no correlation with age, duration of the disease, smoking and BMI. At the same time the serum CTX was associated with chronic SLE damage index (r =0,51), SLEDAI disease activity (r =0,41), concentration of IL-6 (r =0,45) and CRP (r =0,44)
Conclusions: Alterations of bone metabolism were found in 19% female SLE patients in the form of increasing serum CTX and closely associated with the severity and activity of the disease, high levels of CRP and IL-6 and did not depend on the age, disease duration, smoking and body mass index.
Disclosure of Interest: None declared
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AB0515 SKIN MANIFESTATIONS AS INDEPENDENT PREDICTORS AND THE INITIAL RISK FAKTORS FOR SYSTEMIC ANTIPHOSPHOLIPID EVENTS

L. Stojanovich, A. Djokovic, N. Stanisavljevic, M. Zdravkovic. *Internal Medicine Department, University Hospital Center Bezanijska Kosa, Belgrade, Serbia*

Background: Antiphospholipid syndrome (APS) patients express skin manifestations with the presence of various levels of antiphospholipid antibodies (aPL).Several studies have shown the frequency of dermatological manifestations with APS[1,2,3], including livedo reticularis, cutaneous ulcers, acrocyanosis, and other.
Objectives: Dermatological manifestations can be the initial clue in the diagnosis of this disease.
Methods: Our study includes a total of 508 APS patients; 360 were PAPS patients (283 female and 77 male, mean age 44.0±12.9 years),148 had APS associated with SLE/SAPS (133 female and 15 male,mean age 47.7±14.8 years).aPL analysis included:LA, aCL (IgG/IgM), β_2GPI (IgG/IgM).In all patients, we collected data considering frequently occured skin lesions.
Results: Our results showed prevalence of skin manifestations in SAPS group of patinenst regading to PAPS (Table 1). Patients with skin manifestations overall had higher prevalence of thrombosis (Table 2).

Table 1. Prevalence of skin manifestations analyzed in PAPS and SAPS group

	PAPS (N=360)	SAPS (N=148)	p
Livedo	46 (12.8%)	86 (58.1%)	**0.0001**
Skin ulcerations	31 (8.6%)	47 (31.8%)	**0.0001**
Pseudovasculitis lesions	34 (9.4%)	72 (48.6%)	**0.0001**
Superfitial cutaneous necrosis	9 (2.5%)	25 (16.9%)	**0.0001**
Digital gangrene	3 (0.8%)	14 (9.5%)	**0.0001**
Skin manifestations overall	98 (27.2%)	113 (76.4%)	**0.0001**

Table 2. Skin manifestations and thrombosis

	PAPS (p values)	SAPS (p values)
Livedo	0.038	0.062
Skin ulcerations	0.024	**0.004**
Pseudovasculitis lesions	0.007	**0.019**
Superfitial cutaneous necrosis	0.005	0.380
Digital gangrene	1.000	**0.008**
Skin manifestations overall	0.0001	**0.076**

Conclusions: Dermatological manifestations can be very often the initial symptoms of severe manifestations of APS.Our study showed that patients with secondary APS had higher prevalence of skin lesions, and that some aPL types were risk factors for thrombotic manifestations in APS patients
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AB0516 INCIDENCE OF CANCER IN A COHORT OF PATIENTS WITH PRIMARY SJÖGREN SYNDROME

M. Brom, S. Moyano, M. Scolnik, L.E. Pompermayer, I.J. Gandino, E.R. Soriano. *Rheumatology, Hospital Italiano de Buenos Aires, Ciudad Autónoma de Buenos Aires, Argentina*

Background: The most severe complication of Sjögren Syndrome is the development of lymphoproliferative processes. Several neoplasia have been associated with the disease, being non-Hodgkin lymphoma the most frequent one.
Objectives: Our objective was to evaluate incidence of cancer in a cohort of patients with primary Sjögren Syndrome.
Methods: A retrospective descriptive study was performed in a university hospital with its own health insurance and captive population. Using electronic medical records and laboratory database were review the entries performed between 01/01/2000 and 12/31/2015. We analyzed those patients with either diagnosis of Sjögren Syndrome, complain of dry mouth/eyes, or positive antibodies anti-Ro/SSA and anti-LA/SSB.
Among these patients, we included those fulfilling either ACR 2012 or EULAR 2002 Sjögren criteria, or those who were diagnosed as Primary Sjögren Syndrome by the treating rheumatologist even if they did not fulfill criteria.
We then proceeded to register and analyze demographic, clinical and histopathologic information available on their clinical records.
Results: One hundred fifty-seven patients with Primary Sjögren Syndrome were identified. Female accounted for 95.5% of the cohort; mean age at diagnosis was 49.4 years (SD 19). Median follow-up time was 7.7 years (IQR 8). The development rate and type of neoplasia was the following:

- Lymphomas: Three (Two MALT lymphomas of the parotid and one disseminated non-Hodgkin lymphoma). Density of Incidence 260/100,000 person/year (CI 95%: 50 – 750/100,000 person/year)
- Multiple Myeloma: One
- Skin (non-melanoma) neoplasia: Four
- Solid organ Neoplasia: Seven (Four breast cancer, one lung cancer, one uterus cancer, one tongue cancer). Density of Incidence 600/100,000 person/year (CI 95% 240 – 1240/100,000 person/year)

Univariate analysis showed association between lymphoma and cryoglobulinemia (p=0.01; OR=5,8), low C4 fraction of complement (p=0.01; OR=5,1), anemia (p=0.02; OR=1,96) and leucopenia (p=0.03; OR=1,67)
Conclusions: Development of cancer is a known complication of Primary Sjögren Syndrome. The association between lymphoma and cryoglobulinemia, low C4 fraction of complement, anemia and leucopenia enhances the importance of periodic screening for neoplasms among this subgroup of patients with Primary Sjögren Syndrome.
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AB0517 PREDICTIVE FACTORS FOR INFECTION IN SYSTEMIC LUPUS ERYTHEMATOSUS

M. Kechida[1], N. Lorenzo[2], R. Klii[1], S. Hammami[1], I. Khochtali[1]. *[1]Internal Medicine and Endocrinology Department, Fattouma Bourguiba Hospital, Monastir, Tunisia; [2]Internal Medicine and cancerology Department, Saint-Cyr Hospital, Lyon, France*

Background: it's known that infection could complicate the course of systemic lupus erythematosus (SLE) because of the immune status or the long term steroids and immunosuppressors.
Objectives: This study was aiming at determining the prevalence of infectious complications during SLE and their predictive factors.
Methods: A retrospective bi-centric analyzes of 289 patients diagnosed as SLE between January 2004 and December 2016 according to the ARA criteria of 1997 was conducted. A descriptive analysis of infectious complications was first made, then a comparative study between patients with (group 1) and without (group 2) infectious complications was performed to detect predictive factors.
Results: Mean age was 84.6±13 years (14–72 years) with a sex ratio F/M=6.