AB0612

INFRINGEMENT OF THE BLOOD LIPID SPECTRUM IN CHILDREN AND ADOLESCENTS WITH SLE AND THEIR PREDICTIVE VALUE FOR THE FURTHER COURSE OF THE DISEASE

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Background: Infringements of the lipid blood spectrum, or so-called dyslipidemia, are common in adults suffering from SLE and ranges from 36% to 60%.¹ Many researchers confirmed the accelerated development of atherosclerosis among patients and high risk of early cardiovascular complications with deterioration of life expectancy. However, the role of prolonged storage of dyslipidemia and subclinical signs of hypercoagulability on the course of the disease is unspecified.

Objectives: The aim of the study was to clarify the prognostic importance of the role of storage of metabolic shifts in children with SLE on the background of treatment for the course of the disease.

Methods: A total of 35 people aged 7–18 years with SLE who were ill for more than one year and received complex therapy with glucocorticoids and immunosuppressive drugs were examined. The average age of the patients was 173.56 ± 4.17 months; the total duration of the disease was 48.45 ± 3.18 months. General clinical trials included the complex included autoantibodies, disease activity, drugs. Total cholesterol (TCh), triglycerides (TG), high density lipoprotein cholesterol, low-density lipoprotein cholesterol, apolipoprotein B, ApoA-I and lipoprotein-α were evaluated. The state of the blood coagulation system was also studied: fibrinogen of the blood, prothrombin index, thrombin time, active partial thrombin time, d-dimer, international normalised ratio.

Results: The presence of atherogenic dyslipoproteinemia in 60.0% of ill children and adolescents on SLE in children and adolescents, disorders in the system of hemostasis in 25.0% was established.

The data on the presence of interconnection of blood triglycerides with glomerular filtration rate ($r = -0.892$; $p < 0.05$) and activity of transaminases (alanine transaminase) ($r = 0.848$; $p < 0.05$).

As a result of multiple regression analysis with step-by-step exclusion of minor variables, serum creatinine serum levels in patients with SLE depend on the level of TG of blood with high predictive accuracy: blood creatinine = $0.0672684 + 0.0127034 \cdot TG$; $R = 69.79\%$; $R^2 = 62.34\%$; $p < 0.05$.

A multivariable regression analysis also proved that the level of circulating immune complexes in patients with SFV significantly depends on the level of total cholesterol, complement and TG by the formula: $ClC = 1.44278 + 0.188976 \cdot TCh - 1.51503 \cdot \text{complement} + 0.35538 \cdot TG$; $R = 94.25\%$; $R^2 = 90.02\%$; $p < 0.01$.

The mean indices of state of the blood coagulation system indices for children and adolescents with SLE and signs of dyslipidemia were within the norm except for fibrinogen (2.76 ± 0.29 g/L in the presence of dyslipidemia against 3.72 ± 0.46 g/L in patients with dyslipidemia, $p < 0.05$). Its increase persisted in 27.78% of patients.

Conclusions: Thus, violations in the lipid spectrum of blood are often formed in children and adolescents on the background of SLE with the duration of the disease for more than one year. They are not only a risk factor for atherosclerotic lesions; they are also a factor in maintaining the activity of the disease and the development of sustained kidney damage.

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AB0613

CLINICAL AND SEROLOGICAL CHARACTERISTICS OF LUPUS ENTERITIS AND ITS PROGNOSTIC FACTORS IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Lupus enteritis, known as mesenteric vasculitis including multiple ulcers or ischaemic colitis, and protein-losing enteropathy, is a potentially life-threatening complication of systemic lupus erythematosus (SLE). Although glucocorticoid therapy is usually effective, some patients experience recurrences or severe complications in that surgical treatment or intensive immunosuppressive therapy is required. Little evidence, however, is available with characteristics and prognostic factors of lupus enteritis.

Objectives: The aim of this study is to clarify clinical characteristics and associated factors for the prognosis with lupus enteritis.

Methods: Consecutive SLE patients in our hospital between 2009 and 2017 were retrospectively reviewed. Patients who developed lupus enteritis which were associated with mesenteric vasculitis or protein losing enteropathy were enrolled. The diagnosis was made by physical examination, contrast enhanced computed tomography and ^{99m}Tc Albumin scintigraphy. Poor prognosis was defined as any surgical treatment or recurrence.

Results: Among 591 SLE patients who fulfilled the 1997 American College of Rheumatology classification criteria, 23 (3.9%) were identified as developing lupus enteritis, and enrolled. Eighteen (78%) were mesenteric vasculitis and 5 (22%) were protein-losing enteropathy. Eighteen (78%) were female, the mean age at SLE onset was 31.5 years, and the mean duration between the onset of SLE and lupus enteritis was 10.6 years. The mean SLE disease activity index at the onset of lupus enteritis was 9.6. All patients were treated with glucocorticoid (mean initial prednisolone dose was 40.4 mg/day), and 4 patients (17%) were in combination with cyclophosphamide. Among the mesenteric vasculitis patients, 4 patients required surgical treatment and 4 patients experienced recurrence. Comparison between patients with poor prognosis and those without revealed that patients in the poor prognosis group had a higher ratio of multiple ulcer type than ischaemic colitis type (43% vs. 0%, $p = 0.043$), colon lesions (71% vs. 9.1%, $p = 0.012$), higher serum IgA (391 mg/dl vs. 247 mg/dl, $p = 0.008$), and lower serum total cholesterol (152 mg/dl vs. 191 mg/dl, $p = 0.012$). No difference was found in abdominal symptoms, SLE disease activity index score at lupus enteritis onset, anti-dsDNA antibodies and complement levels, initial prednisolone dose, and the concomitant cyclophosphamide use between the two groups. No recurrence was seen in patients with protein-losing enteropathy.

Conclusions: The higher level of serum IgA and lower level of serum total cholesterol are associated with surgical treatment or recurrence and are potential predictive biomarkers for poor prognosis.

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AB0614

THE LUPUS STUDIES: THE EUROPEAN AND SPANISH POINT OF VIEW

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Background: Improving systemic lupus erythematosus patient care comes from the advances performed first in basic science that improved our understanding of the mechanism underlying the pathogenesis and finding effective and safe medications that led to treatment improvement. Furthermore, clinical trials play a key role in advancing both our medical knowledge of the disease and novel treatments.

Objectives: This work aims to offer an overview of the type and characteristics of lupus studies and to analyse the contribution that Europe and Spain have made in supporting those investigations.

Methods: A systematic review of the public registry database of publicly and privately supported clinical studies (CS), ClinicalTrials.gov, was done considering “lupus” as a search criteria (database generated with all CS registered on the 19th September 2017). Data collected included: CT code, title, sponsor, countries participating, study phase, condition and intervention.

Results: *Study distribution.* By 19th September 2017 there were a total of 256127 CS registered in the world, from which 611 (0.24%) are associated with lupus studies. From those, 27.2% are carried out in Europe. Spain is the third country in Europe in number of lupus CS after France and Germany.

Type and distribution of the studies. In the generated clinicaltrials.gov data base, the studies are associated to a type of study. The distribution varies depending on the geographical area. In general, the main type of lupus studies conducted in the world are related to the discovery and development of new treatments ($n = 406$) but there are also behavioural, devices investigation, diagnostic test, dietary supplementation, genetic and radiation studies. In Spain, 94.6% of the studies registered are related to new treatment development.

The distribution of the lupus studies are as follows:

Financial support. 58.6% of all studies are funded by sources other than industry and 34.8% are supported by it. In a detailed analysis, 12.5% of the studies are under the economic support of the National Institutes of Health (NIH) or the partnership of NIH+other partners. The scenario is different in Europe where industry supported 54.8% of the studies and in Spain where industry supported 87.3% of the studies.

Moreover, the funding profile in Spain showed that 92.3% of the studies associated with new treatments are supported by industry and 7.7% of them are supported by other sources. On the other hand, 100% of the studies not related with

new treatments development are supported by funding source other than industry.

Abstract AB0614 – Table 1

Phase	Worldwide (n)	%	EU (n)	%	Spain (n)	%
Early Phase 1	7	1.1	2	1.2	0	0.0
Phase 1	76	12.4	17	10.2	3	5.5
Phase 1/2	24	3.9	4	2.4	0	0.0
Phase 2	143	23.4	57	34.3	23	41.8
Phase 2/3	15	2.5	5	3.0	1	1.8
Phase 3	76	12.4	34	20.5	21	38.2
Phase 4	47	7.7	7	4.2	3	5.5
No data	223	36.5	40	24.1	4	7.3

* The percentages have been rounding

Conclusions: Europe participate in more than a quarter of Lupus clinical studies and Spain is the third European country participating in those clinical studies. New treatment development studies are the main CT performed worldwide and the percentage is even higher in Spain. Regarding the study phase, the distribution of CT in Europe and Spain are similar although phase I studies in Spain are less frequent.

From all studies registered, the majority are non-industry sponsored studies. In Europe and in Spain the situation is the opposite, as 87.3% of the studies are pharma-sponsored studies.

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AB0615 CHANGES IN SOMATOSENSORY EVOKED POTENTIALS IN PATIENTS WITH PRIMARY SJÖGREN'S SYNDROME

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Background: Primary Sjogren's syndrome (pSS) is a chronic autoimmune disease, which, in addition to impaired function of exocrine glands, can affect other organs including nervous system.

Objectives: The aim of the study was to establish whether in patients with pSS without central nervous system (CNS) involvement, the function of the central portion of the sensory pathway can be challenged.

Methods: In 33 patients diagnosed with pSS without clinical features of CNS damage and normal head CT scan, somatosensory evoked potentials (SEP) were studied. The results were compared to other clinical parameters of the disease, particularly to immunological status. The control group consisted of 20 healthy volunteers selected with respect to age and sex.

Results: Mean latency of all components of SEP were considerably prolonged in patients compared to the control group. Mean interpeak latency N20-N13 (duration of central conduction TT) did not differ significantly between the groups. However, in the study group, mean amplitude of N20P22 and N13P16 was significantly higher compared to healthy individuals. In patients with PSS, significant differences in SEP parameters depending on duration of the disease, duration of arthralgia and presence of SSA and SSB antibodies were noted. No significant differences in mean SEP parameters were observed with respect to skin lesions, xerophthalmia, current joint pain and swelling, focus score, levels of C3 and C4 complement components, ESR, CRP and presence of Ro52 antibodies.

Conclusions: The authors confirmed central nervous system involvement often observed in patients with pSS. They also showed dysfunction of the central sensory neuron as a difference in amplitude of cortical response, which indicates sub-clinical damage to the CNS.

Disclosure of Interest: None declared

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AB0616

THE CORRELATION BETWEEN FOCUS SCORE AND ULTRASONOGRAPHY OF MAJOR SALIVARY GLANDS IN PRIMARY SJÖGREN SYNDROME

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Background: Currently, the role of salivary gland ultrasonography (SGUS) in the diagnosis of primary Sjogren's syndrome (pSS) is being determined. So far, in none of the proposed classification criteria for pSS SGUS is taken into consideration. The most recent analyses of patients show that SGUS can prove to be useful in the identification of even early forms of pSS.

Objectives: We analyzed the SGUS changes in patients with pSS and its correlations with focus score (FS) of minor salivary glands and immunological and laboratory profile.

Methods: We included 68 patients with pSS in the mean age of 51, based on the classification criteria from 2002.

Results: In 33 (48%) patients were abnormal findings in major salivary glands detected (table 1). Scattered hypoechoic changes of different size were the most common observed changes in SGUS, mainly in parotid glands.

Abstract AB0616 – Table 1. Abnormal images in salivary and mandibular glands in patients with pSS.

Number of patients – 33	Parotid and submandibular glands
Changes in SGUS	Parotid glands 23 patients (70% of changes) Submandibular glands 10 patients (30% of changes)
SGUS changes:	
- gland enlargement	48% of changes
- scattered hypoechoic changes of different size	85% of changes
- fibrosis	6% of changes
- lymph glands	15% of changes
- gland atrophy	12% of changes
- ducts enlargement	3% of changes

The FS was significantly higher in patients with changes in SGUS compare to the patients with normal images of major salivary glands (2.6 SD 1.3 vs 1.8 SD 1.2; p=0.02).

In patients with SGUS abnormalities the hypergammaglobulinemia was most often observed (1.7 g/dl vs 1.2 g/dl; p=0.02). There was not the correlation between changes in major salivary glands and age (p=0.5), CRP value (p=0.1), ESR value (p=0.1), with blood cell count (p=0.1), rheumatoid factor (p=0.1), dry eye (p=0.1), oral dryness (p=0.2), anti-SSA antibodies (p=0.5), anti-SSB antibodies (p=0.2), anti-Ro52 antibodies (p=0.4) observed.

Conclusions: SGUS is a useful tool in patients with pSS. The abnormal images in SGUS of major salivary glands correlated with focus score of minor salivary glands and hypergammaglobulinemia but not with specific antibodies.

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AB0617

ACROSS-SECTIONAL STUDY OF NAILFOLD MICROVASCULAR CHANGES IN INDIAN PATIENTS WITH RNP+ LUPUS AND MCTD USING NAILFOLD VIDEOCAPILLAROSCOPY

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Background: Nailfold Capillary (NFC) changes represent degree of microvascular involvement in autoimmune connective tissue diseases. Anti U1-RNP is associated with specific internal organ involvement in SLE. Nailfold capillaroscopy may objectively predict the systemic microvascular abnormalities in SLE patients with positive Anti U1-RNP antibody.

Objectives: To study nailfold microvascular changes (NFVC) in SLE patients with RNP +and compare them with NFVC changes observed in patients with RNP negative SLE and Mixed connective tissue disease (MCTD).

Methods: Nailfold videocapillaroscopic (NFVC) examination (Optilamediscope, 200X) was performed in consecutive patients satisfying classification criteria of

SLE with or without Anti-U1 RNP positivity. Patients satisfying criteria for MCTD were recruited as disease controls. Individual NFC parameters were analysed by a blinded assessor. Changes in three groups were compared using non-parametric tests. Ordinal logistic or linear regression were used wherever applicable to assess any independent association of NFC changes with disease groups.

Results: Total of 81 patients were studied, of which 28 had SLE with RNP+ (age 30.0 ± 10.37 ; 26 females), 26 had SLE without RNP positivity (age 29.42 ± 9.20 ; 25 females) and 26 had MCTD (age 37.0 ± 9.86 ; 25 females). Capillary density was significantly reduced in MCTD as compared to RNP+SLE patients (5.11 ± 1.69 /mm vs 7.25 ± 1.38 /mm, $p=0.0001$), as well as in RNP+SLE as compared to RNP negative SLE patients (7.25 ± 1.38 /mm vs 8.92 ± 1.13 /mm, $p=0.0001$). Conversely, patients with RNP+SLE had more frequent giant capillaries, enlarged capillaries and ramified/branched capillaries as compared to RNP negative SLE patients ($p=0.047$, 0.001 and 0.029 respectively). However, there was no statistical difference in number of haemorrhages among these groups. These changes were more severe in patients with MCTD as compared to RNP+SLE. Ordinal logistic regression showed more severe reduction in capillary density in patients with RNP+SLE as compared to RNP negative SLE (OR=9.5, $p=0.007$) independent of the presence of Raynaud's, ILD and disease duration.

Conclusions: Presence of anti-U1RNP antibody is associated with micro-vascular abnormalities in SLE as detected by NFVC. Patients with MCTD have more profound abnormalities as compared to RNP+SLE patients.

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AB0618 PREVALENCE OF HYPOVITAMINOSIS D IN ADULTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS AND THE RELATIONSHIP WITH SLEDAI 2K IN PATIENTS TREATED IN TWO RHEUMATOLOGY SERVICES, BOGOTÁ 2017

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Background: Vitamin D is a steroid hormone with pleiotropic effects on physiological processes. Among others, immune system regulation and their analogues prevent symptom development of autoimmune diseases such as SLE. A previous research in a Colombian clinic found a prevalence of hypovitaminosis D of 87% in healthy population, but hypovitaminosis D is higher in SLE patients than healthy controls.

Objectives: To establish the prevalence of hypovitaminosis D in patients with SLE and relationship with SLEDAI-2K.

Methods: A cross sectional study was carried out. 80 medical records with a diagnoses of SLE o CIE-10 M30-M36 were identified and we included patients >18 years of age who meet at least 4 of the 11 criteria to diagnoses of SLE for medical record. The analysis included means, DS and Kruskal Wallis with p -value <0.05.

Results: The majority of patients are women (94%), with an average age of 39.9 years, married (41%), with secondary education (56.7%) and different occupations. It was found that the patients with higher activity, had lower vitamin D levels. Additionally, if the patient had lupus nephritis, vitamin D levels decreased even more.

Abstract AB0618 – Figure 1

Conclusions: Patients with active systemic lupus Erythematosus, (SLE) have hypovitaminosis D more frequently and we noticed that patients with renal involvement have the lowest levels of vitamin D, which justifies a later analysis.

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AB0619 MANY PERIPHERAL FRACTURES DESPITE NORMAL BONE MINERAL DENSITY IN CAUCASIAN SLE PATIENTS

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Background: Clinical outcome has improved in systemic lupus erythematosus (SLE) and thus, early management of comorbidities like cardiovascular disease and osteoporosis has become highly important. In this disease, osteoporotic risk factors such as female gender, early onset of disease leading to long disease duration, high degree of systemic inflammation, high frequencies of glucocorticoid usage often at higher doses, and chronic fatigue or pain compromising physical activities are often present in combination.¹ Rh-GIOP (NCT02719314) is an ongoing prospective study monitoring glucocorticoid (GC)-induced osteoporosis of rheumatic patients, established in 2015 at the Charité University Hospital. To date, the database comprises clinical data and bone mineral density data measured by dual x-ray absorptiometry (DXA) of 592 patients with inflammatory rheumatic diseases.

Objectives: To quantify bone mineral density and fractures in SLE patients.

Methods: Bone mineral density (BMD) data of SLE patients as measured by dual x-ray absorptiometry (DXA) were analysed with regard to their relation to detailed clinical data.

Results: 43 female and 6 male SLE patients aged between 20 and 77 years (mean: 46.31 years) were assessed by DXA (all of Caucasian ethnicity, mean disease duration: 15.49 years; 61% denied any physical activity). SLE medication included glucocorticoids (93.9%; mean cumulative dose: 25.5 g), antimalarials (67.3%), azathioprine (30.6%), mycophenolate-mofetil acid (22.4%), belimumab (16.3%), cyclophosphamide (10.2%) and methotrexate (8.1%).

In 26 (60.5%) of all studied SLE patients, 36 (92.3%) peripheral and 3 (7.7%) vertebral fractures were recorded. Notably, 6 of these patients with fractures were younger than 30 and only 4 older than 60 years. 10 of all 39 fractures (25.6%) were low-trauma fractures. Of note, 11/26 patients (42.3%) with fractures had a normal BMD, 9/26 (34.6%) osteopenia and 6/26 (23.7%) osteoporosis, while only 4 (15.4%) of them initially received anti-osteoporotic medication.

Conclusions: There is a high occurrence of peripheral fractures in SLE. Moreover, 4 out of 10 SLE patients developed fractures despite a normal BMD, stressing that this parameter is of limited value for correctly identifying the fracture risk in SLE. The analysis of a larger number of patients and in-depth analyses are necessary to improve management of osteoporosis and to better prevent fractures in SLE patients.

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