AB0513 UTILITY OF RENAL REBIOPSY IN PATIENTS WITH LUPUS NEPHRITIS

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Background: The pathological class of lupus nephritis (LN) may change to a different class during the course of the disease. Renal biopsy is repeated is repeated in many patients during a flare but there is there is no agreement about systematically recommending them because proliferative lesions on their original biopsy rarely switch to a pure nonproliferative nephritis during a flare. However, renal rebiopsy may be useful in some cases to make appropriate adjustments or changes of treatment.

Objectives: To analyze the impact of renal rebiopsy on the therapeutic approach in patients with previous histological diagnosis of LN who experience a worsening in the clinical parameters of renal involvement.

Methods: Retrospective study of patients with histological diagnosis of NL subjected to at least one renal biopsy. We studied the demographic, clinical, histopathological variables of the first and subsequent renal biopsies, received treatment and the therapeutic modifications in relation to the result of the rebiopsies.

Results: We analyzed 35 patients diagnosed with LN between 1978 and 2017. 9 of them had been rebiopsied at least on one occasion and made a total of 11 rebiopsies (7 patients with a rebiopsy and 2 patients with 2 rebiopsies). All patients were female and Caucasian, except for a Hispanic woman, with a mean age at the time of the rebiopsy of 31 ± 12 years (14-55). The mean serum creatinine at the time of the first rebiopsy was 0.8 ± 0.17 mg/dl (0.5-1.06) and in the second, 1.18 ± 0.05 mg/dl (1.15-1.23). The fundamental indication for the rebiopsy was the increase in proteinuria, up to non-nephrotic range in 64% of the patients and within the nephrotic range in 36%. In comparison with the previous biopsy, 3 of the rebiopsies (27%) showed evolution from a non-proliferative to a proliferative form (from II to III, from II to IV and from V to V + IV). 4 of the rebiopsies (36%) started from a proliferative class and changed class but within these forms (3 from IV to III and and 1 from III to IV). The remaining 4 rebiopsies (27%) showed no change in the histological type. Regarding the baseline biopsy, we observed a decrease in the index of activity of the rebiopsies (5.4 ± 2.2 vs 3.4 ± 2.5, p = 0.017) and an increase in the chronicity index (0.8 ± 0.7 vs 2.9 ± 3.2, p = 0.027). In all cases, therapeutic modifications were carried out. In 9 cases (82%) the immunosuppression was increased and in two of them (18%) it was decreased.

Conclusion: The repetition of renal biopsy in cases of LN with clinical data of renal deterioration is relevant. The change of histological class and the evolution of activity and chronicity indexes support the decision to increase immunosuppression and are fundamental to diminish it.

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AB0514 PARATHORMONE BUT NOT VITAMIN D SERUM LEVELS ARE ASSOCIATED WITH SUBCLINICAL ATHEROSCLEROSIS IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Growing evidence supports a link between alterations in bone metabolism and cardiovascular (CV) disease in both general and autoimmune populations.

Objectives: In the current study we aimed to explore whether vitamin D deficiency and/or increased parathormone (PTH) levels, as well as impairment of bone mass density, influence CV risk in patients with systemic lupus erythematosus (SLE).

Methods: 138 consecutive SLE patients were enrolled in the study. Clinical features, hematological, serological and immunological profile, as well as therapeutic regimens was recorded in all patients. Classical CV and osteoporosis risk factors were assessed in all participants. Intima-medial thickness scores (IMT) and carotid and/or femoral (C/F) plaque formation were evaluated by ultrasound. Assessment of bone mineral density (BMD) and asymptomatic osteoporotic fractures was also performed by dual X-ray absorptiometry and lateral thoracic and/or lumbar spine X-rays, respectively. Univariate and multivariate models were implemented for statistical analysis.

Results: PTH -but not 25(OH)vitamin D3- serum levels were found to be increased in lupus patients with subclinical atherosclerosis (plaque formation and/or arterial wall thickening) compared to those without (51.1±27.7 vs 37.4±18.4 pg/ml, p= 0.003 and 54±32.7 vs 40±18.3 pg/ml, p= 0.02, respectively). Abnormal PTH serum concentrations (>65 pg/ml) in SLE patients was identified as a risk factor for both plaque formation and high IMT scores (>0.9mm) [OR 95% (CI): 8.2 (1.8-37.4) and OR 95% (CI): 3.9 (1.3-11.8), respectively]. High PTH levels were found to be associated with low 25(OH)vitaminD3 levels, advanced age and increased triglycerides in the lupus cohort. Moreover, SLE patients with plaque formation exhibited increased rates of osteoporosis (based on WHO classification) compared to those without [19.5% vs 5.3%, p= 0.017, OR 95% (CI): 4.4 (1.2-15.9)]. Finally, an inverse correlation between femoral neck BMD values and total IMT scores was observed (r:-0.42, p=0.008).

Conclusion: Subclinical atherosclerosis in patients with lupus is associated with increased serum PTH levels and reduced bone mass density. These findings further support the presence of shared etiopathogenetic mechanisms between atherogenesis and altered bone metabolism.

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AB0515 OBESITY AND WEIGHT LOSS IMPACT IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

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Background: Obesity is considered a chronic low-grade inflammatory status due to the release of bioactive substances, as pro-inflammatory cytokines, by the adipose tissue, and it is known negatively affecting some autoimmune inflammatory diseases, like Rheumatoid Arthritis. Few data are available on the role of obesity in Systemic Lupus Erythematosus (SLE) disease.

Objectives: To evaluate the distribution of Body Mass Index (BMI) categories in SLE patients and the association between SLE disease activity and BMI groups. Furthermore, to dissect the impact of weight loss in a cohort of overweight/obese SLE patients, evaluated with a multidisciplinary approach.

Methods: Consecutive SLE patients, diagnosed according to the 2012 SLICC criteria, were enrolled. Clinical and demographic characteristics, disease duration, BMI category, laboratory indices and current therapies were collected at baseline and at follow-up visits. A subgroup of SLE patients with BMI ≥ 25 Kg/m² underwent a scheduled diet under a Nutritionist guide (1200 calories/daily) and Psychologist support when necessary, maintaining the SLE therapy unchanged and were evaluated by a rheumatologist and a nutritionist every 3 months and clinical and laboratory data and the ACR/EULAR core data set were registered at each follow-up(FU) visit.

Results: Of the 277 patients (age 42.2±14.4 years, disease duration 8.4 ± 8.0 years, SLEDAI-2K 6.6±7.6, SLICC 1.9±1.5), 47.6% had articular, 32.3% renal, 23.6% neurological and 21.9% had serositis involvement, respectively. Considering the whole cohort, 66 (23.9%) patients had BMI between 25 and 30 Kg/m² and 34 (12.3%) a BMI ≥ 30 Kg/m² [of which 15 (5.4%) with BMI ≥ 35 Kg/m²]. Overweight/obese SLE patients were predominantly male (20.0%) with respect to patients with BMI < 25 Kg/m² (4.5%, p<0.001). Considering the therapeutic regimens, antimalarials treatment was ongoing in 39.4% of overweight SLE patients and in 61.8% of obese SLE patients compared to 28.7% in normal weight SLE patients (p< 0.001 for overweight and p<0.001 for obese patients), without any significant correlation between BMI and cumulative steroid dose during

the follow-up. Considering the whole SLE cohort, cardiovascular events were more frequent in obese patients (14.7%) than in overweight (7.6%) and normal weight (2.9%) SLE patients (ANOVA test: $p=0.01$). Twenty-nine SLE patients with BMI ≥ 25 Kg/m² (BMI: 33.5 ± 5.1 Kg/m², age: 47.7 ± 12.3 years, disease duration: 11.9 ± 9.0 years; SLEDAI: 10.5 ± 5.7 , SLICC: 1.3 ± 1.1) underwent a scheduled low calories diet. A significant reduction in BMI was observed at 6 and 12 month follow-up [$6.6 \pm 5.7\%$ at 6 months FU ($p = 0.001$) and $7.0 \pm 7.2\%$ at 12 months FU ($p=0.002$), respectively] as well as a reduction in disease activity [SLEDAI at 6 months FU: 4.5 ± 4.0 ($p=0.001$) and at 12 months FU (0.7 ± 0.9 ($p < 0.001$)). Finally, a significant decrease of systemic inflammatory markers as C-Reactive Protein ($p<0.05$) was observed in SLE patients who achieved $>5\%$ weight loss compared to SLE patients who did not.

Conclusion: Obesity represents a modifiable factor for improving outcomes among obese SLE. A weight loss obtained with a controlled diet may reduce cardiovascular events and reduce the state of chronic inflammation subtended by the activity of adipose tissue.

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AB0516

AUTOANTIBODY PROFILE ANALYSIS AND ITS ASSOCIATION WITH CLINICAL MANIFESTATIONS IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

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Background: Systemic lupus erythematosus (SLE) is an autoimmune systemic disease characterized by autoantibody production. The presence of some of them is related to specific clinical manifestations. Previous studies have classified SLE patients according to an autoantibody profile, associating them to specific clinical groups.

Objectives: To define SLE patient groups according to an autoantibody profile and to analyze the correlation of these profiles to clinical manifestations, clinical activity and accumulated damage.

Methods: A cross-sectional observational study of SLE patients diagnosed according to SLICC 2012 criteria was conducted. A clinical and analytical evaluation was performed in all cases. Clinical manifestations were described according to RELESSER study. We selected 8 autoantibodies to classify SLE patients in different subgroups according to autoimmune similar profiles: anti-dsDNA, anti-Sm, anti-RNP, anticardiolipin IgG o IgM (aCL IgG/M), anti-B2microglobulin IgG o IgM (aB2M IgG/M), lupus anticoagulant (LA), anti-Ro and anti-La. Biostatistical analysis was performed using software R and immunological profiles were created according to previous study of Artim-Esen B et al. 2014.

Results: 142 SLE patients were evaluated (94.4% female) with a mean age at diagnosis of 33.29 (13.53) and a mean time of disease evolution of 15.82 (10.56) years. Mean SLEDAI score was 5.91 (5.6) and mean SLICC value 1.1 (1.46). Frequency of the selected autoantibodies was: ANAs 87.3% (n=124), anti-dsDNA 36.62% (n=52), anti-Sm 9.2% (n=13), anti-RNP 3.5% (n=5), aCL IgG/M 20.15% (n=27), aB2M IgG/M 21.88% (n=28), LA ANTI-LA? 26.27% (n=31), anti-Ro 45.07% (n=64) and anti-La 16.2% (n=23).

Profile n°2 included SLE patients with anti-Sm/RNP positivity. Profile n°3 included patients with anti-Ro/La positivity and not included in profile n°2. Profile n°4 included patients with aCL IgG/M or aB2M IgG/M or LA positivity and not included in previous profiles. Profile n°5 included patients who exclusively showed anti-DNA positivity. Profile n°1 included all patients excluded from the other profiles.

Depending on the results obtained, we analyzed autoantibody levels in order to assess its association with the presence of the described clinical affections. A significant association among hematological affection and high levels of anti-Ro ($P<0.0001$), anti-La ($P=0.022$) and anti-Sm ($P=0.018$) was observed. We also observed a tendency of presenting a higher rate of mucocutaneous affection, musculoskeletal and renal affection and Sjögren syndrome in patients classified in Profile 3.

Conclusion: Profile n°1 patients (absence of autoantibodies) were diagnosed earlier and had a longer disease evolution, whereas Profile n°5 patients (only anti-DNA positivity) were diagnosed at a mean age of 36 years and had a shorter disease evolution. We observed an association between the presence of anti-Ro/La and hematological affection, as well as high incidence of Sjögren syndrome in these subgroup of patients.

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AB0517

CORRELATION BETWEEN PATIENT-REPORTED OUTCOMES OF HEALTH-RELATED QUALITY OF LIFE AND CLINICAL ACTIVITY IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

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Background: Patient-Reported Outcomes (PROs) allow us to know the way the disease could affect patients, and maybe could not be detected in clinical measures. Among these, PROs of health-related quality of life (PRO-QL) represents patient evaluation of its health status and treatment, which affects the functional, psychological, social and emotional capabilities. In fact, patients with the same health status could show different PROs-QL. In the case of systemic lupus erythematosus (SLE), patients experience many inflammatory symptoms and all of them can affect the health-related quality of life in different ways.

Objectives: We aimed to measure the PRO-QL in SLE patients and correlate them with the clinical activity of the disease.

Methods: A cross-sectional observational study with SLE patients diagnosed according to SLICC 2012 criteria was performed. In all cases SLEDAI score was carried out, and patients full-filled questionnaires of fatigue (FACIT-FATIGUE), quality of life (EQ-5D-5L), disability (HAQ) and a Global Health Status Scale (GHS) (0-100). Biostatistical analysis with software R was performed, using the multivariate analysis of variance by Pillai test.

Results: 54 SLE patients (91.84% female) participated in the study, with a mean age at diagnosis of 27.55 ± 13.21 years and a mean time of disease evolution of 20.45 ± 9.7 years. Mean SLEDAI score was 6.63 ± 6.89 , with a 37.04% of patients with SLEDAI > 6 . The 64.66% of patients were under glucocorticoid treatment, 38.77% under immunosuppressants (methotrexate, azathioprine o mycophenolate) and 51.02% under antimalarials.

Patients showed a mean score of 34.02 ± 12.38 in FACIT-FATIGUE, 0.72 ± 0.26 in EQ-5D-5L, 0.62 ± 0.71 in HAQ and 64.02 ± 25.93 in GHS. Statistical analysis showed correlation between SLEDAI score and the four questionnaires of PROs-QL ($P<0.001$). Particularly in those cases with high clinical activity we observed low scores of EQ-5D-5L, FACIT-FATIGUE and GHS, and an increment in HAQ. We performed the previous analysis considering as correcting factors the age, years of disease evolution, glucocorticoid treatment, antimalarials and immunosuppressants. We also obtained a correlation between clinical activity and PROs-QL ($P=0.0107$).

Conclusion: We observed a correlation between PROs-QL full-filled by SLE patients with the clinical activity of the disease, independently of glucocorticoid treatment, antimalarials and immunosuppressants, the age and the disease evolution.

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