adequate counseling. The adoption of a contraceptive method and the number of pregnancies were not different between the two groups. The history of use of embryotoxic/teratogenic drugs was associated with a higher frequency of adequate counseling (79.6% vs 41.5%, p=0.001). According to the patients, adequate counseling was given by the rheumatologist in 75.5% of the cases (p=0.001).
Conclusions: Adequate preconceptional counseling in our patients with ARDs at the reproductive stage is deficient. A multidisciplinary strategy is required to improve the frequency and quality of preconception counseling in patients with ARDs.
Disclosure of Interest: None declared
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FRI0280 ASSOCIATION BETWEEN INSULIN RESISTANCE, SUBCLINICAL ATHEROSCLEROSIS AND ACTIVITY/DAMAGE STATUS IN SLE PATIENTS

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Background: Insulin resistance (IR) may contribute to an increase in cardiovascular risk in general population as well as in Systemic Lupus Erythematosus (SLE) patients.
Objectives: The aim of this study was to examine the association between IR and disease activity, disease characteristics, drug exposure and subclinical atherosclerosis in patients with SLE.
Methods: Cross-sectional study that encompassed 87 SLE patients and 82 sex-matched controls. IR by homeostatic model assessment (HOMA2), insulin, C-peptide serum levels and lipid profile were assessed in both groups. Activity (SLEDAI), severity (Katz) and damage (SLICC) scores, carotid intima-media thickness (cIMT) and carotid plaques (ultrasound) were assessed in SLE patients. A multivariable regression analysis, adjusted for IR related factors, was performed to evaluate the differences between groups in IR indexes and, in SLE patients, the interrelation between IR and disease activity/characteristics as well as subclinical atherosclerosis.
Results: Median disease duration was 16 years (IQR 9–21). Body mass index, abdominal circumference, hypertension or dyslipidemia did not differ between groups. According to the SLEDAI score, 40% of patients were in no activity, while 32, 21, 18 and 1% were in mild, moderate, high and very high activity respectively. HOMA-IR-C-peptide (beta coefficiente 0.53, [95% CI 0.25–0.82], p=0.00) was increased in SLE patients when compared to controls, as well as HOMA %B C peptide levels (beta coef. 35, 95% CI 18–52, p=0.00). Similarly, insulin sensitivity estimated through HOMA-S% was inferior in SLE patients (-beta coef. -37, 95% CI -63–11, p=0.01).This diferences remained significant even after adjustment for IR related factors.
SLICC damage index was clearly asociated with IR indexes; higher index values were related to higher HOMA-IR-C-peptide (beta coef. 37, [95% CI 16–57], p=0.00) and lower HOMA-S% levels (beta coef. 30%, [95% CI -47–14], p=0.00). Katz severity index showed correlation with HOMA-IR-C-peptide (beta coef.-5, [95% CI -11–0], p=0.04). These associations remained significant after adjustment for age, gender, smoking, hypertension and dyslipidemia, and, in relation with the SLICC index, also after adjustment for prednisone intake. SLEDAI activity index was not related to IR indexes.
The use of prednisone was positively associated with HOMA-IR both when considered binary (beta coef 47, [95% CI 31–63], p=0.00) and continous (beta coef 2 [95% CI 0–5] per mg, p=0.03). Hydroxycloroquine (or other drugs) use was not associated with IR indexes, neither were disease duration, antiDNA titers and complement serum levels.
Carotid plaques were found in 20% of the SLE patients. The presence of carotid plaques was correlated with a higher HOMA-IR-C-peptide (OR 3.15 [95% IC 1.17–8.51], p=0.02), and a higher cIMT value was associated with a lower HOMA-IR-S%>C-peptide (beta coef. 0.98 [95% CI 0.96–0.99], p=0.03). Nevertheless, after adjustment for cardiovascular risk factors this relation was lost.
Conclusions: Activity and damage indexes in SLE patients are independently related to the development of IR. IR is associated with subclinical carotid atherosclerosis in SLE patients on the univariate analysis.
Disclosure of Interest: None declared
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FRI0281 UTILITY OF MORNING SAMPLE OF URINE PROTEIN/CREATININE RATIO FOR ASSESSMENT OF PROTEINURIA IN PATIENTS WITH LUPUS NEPHRITIS

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Background: Proteinuria is the principal urinary biomarker for the screening of Lupus nephritis (LN) and for monitoring disease progression. 24-hour urine collection has been the foundation for monitoring disease activity in patients with LN, but collections are often inaccurate and inconvenient. The European League Against Rheumatism and American College of Rheumatology have recommended the urine protein/creatinine ratio (UPCR) for use in management of LN.
Objectives: We aimed to evaluate the diagnostic accuracy of the morning sample of UPCR compared with 24-hour urine collection for the detection of proteinuria and to determine the UPCR for different proteinuria ranges in patients with LN.
Methods: Three hundred and thirty seven LN patients were enrolled. The correlation between the UPCR in the morning spot urine samples and urinary protein excretion in the 24-hour collections was examined using the Pearson correlation test. The best cutoffs for UPCR predicting a 24-hour protein excretion were determined with the receiver operating characteristic curve (ROC).
Results: It was found a good positive correlation between the UPCR and 24-hour protein excretion, with a correlation coefficient (r) of 0.891 (Fig 1). The best cutoff which gave the maximum area under the curve was 0.44 for 0.5 g, 0.92 for 1.0 g, 2.21 for 2.0 g, 2.70 for 3.0 g, 3.49 for 4.0 g and 4.59 for 5.0g.

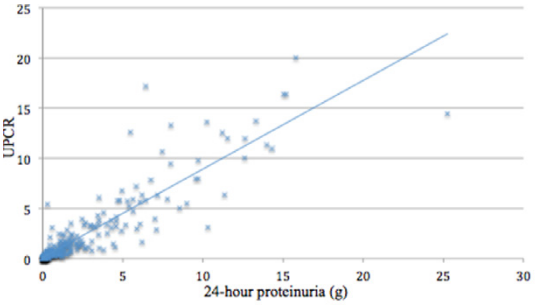

Fig. 1 Scatterplot of correlation between protein content in a 24-hour urine collection sample and morning sample of UPCR

Conclusions: The UPCR can be used as a screening test as a good predictor for proteinuria of LN patients. Also, UPCR is a valuable tool with which to monitor disease progression.
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Disclosure of Interest: None declared
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FRI0282 CARDIOVASCULAR DAMAGE IN DECEASED PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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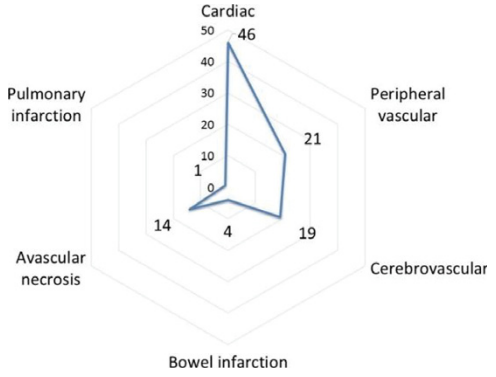
Background: Cardiovascular comorbidities are a major contributor of damage in patients with SLE. They are driven by classical, as well as SLE-related risk factors, i.e. disease activity and immunosuppressive treatment.
Objectives: We aimed to analyze cardiovascular damage (CVD) in a group of 90 deceased SLE patients regularly followed-up in a routine academic setting at our Department, and to identify features associated with accrual of CVD.
Methods: We retrospectively observed 90 SLE patients (68 females) deceased within the 2002–2011 period. All patients were ≥18 years of age and Croatian residents at the time of death, fulfilling ≥4 classification criteria of the American College of Rheumatology (ACR). We identified patients with CVD, including the following components of the Systemic Lupus International Collaborating Clinics (SLICC)/ACR damage index: cardiovascular damage as defined by the index (cardiac damage), peripheral vascular damage, cerebrovascular accident, pulmonary infarction, bowel infarction and avascular necrosis. An extensive set of variables was compared between patients with and without CVD: demographics, ACR criteria at diagnosis and death, damage (according to the SLICC/ACR index) and its components one year following diagnosis and at the time of death, disease activity at diagnosis (according to the European Consensus Lupus Activity Measurements index, ECLAM), as well as features of the metabolic syndrome, smoking and immunosuppressive treatment. Frequencies were compared using the χ^2 and Fisher's exact test, and continuous variables using the t-test and Mann-Whitney U test. Variables associated with CVD in the univariate analysis were included in a multivariate logistic regression model.
Results: We identified 63/90 patients with CVD, including 46/63 (73%) with cardiac damage, 19/63 (30%) with peripheral vascular damage, 21/63 (33%)

with cerebrovascular accident, 4/63 (6%) with bowel infarction, 14/63 (22%) with avascular necrosis and a single patient with pulmonary infarction (Figure 1). Patients with CVD had a higher disease duration at time of death compared to patients without CVD (12±8 vs. 7±6 years), as well as higher cumulative proportions of hematologic disorder (60/63 vs. 15/27), lymphopenia (48/63 vs. 10/27), pulmonary damage (19/63 vs. 1/27), fractures (25/63 vs. 2/27), higher overall damage (6.0±3.0 vs. 2.4±2.0) and a higher proportion of secondary antiphospholipid syndrome (14/63 vs. 1/27) ($p<0.05$). Conversely, patients with CVD had a lower proportion of discoid lupus at diagnosis (7/49 vs. 9/24) and a lower proportion of skin damage one year following diagnosis (2/63 vs. 5/27) ($p<0.05$). Parameters associated with cardiovascular damage in the multivariate model were cumulative fulfillment of lymphopenia as a classification criterion (odds ratio, OR 4.7 (95% confidence interval, CI 1.3–17.0)) and accrual of pulmonary damage (OR 13.1 (95% CI 2.2–76.3)).

Figure 1. Distribution of cardiovascular damage in the analyzed group (numbers represent frequencies of each subtype of cardiovascular damage)



Conclusions: More than two thirds of deceased patients accrued CVD over the disease course. Lymphopenia and pulmonary damage may be associated with CVD in deceased SLE patients.

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FRI0283 AN IMMUNOLOGICAL PROFILE COMBINING INNATE AND ADAPTATIVE IMMUNITY BIOMARKERS IDENTIFY RISK FOR EVOLUTION INTO SLE IN WOMEN WITH RECURRENT PREGNANCY LOSS

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Background: Autoantibodies, low complement levels and higher NK cell counts are present in a subset of women with recurrent pregnancy loss (RPL). The combination of these abnormalities might be a surrogate profile for the presence of a subclinical inflammatory or autoimmune condition.

Objectives: In a cohort of women with unexplained RPL we evaluated if an immunological profile combining innate and adaptive immunity mediators was associated with the presence of distinct clinical characteristics that are commonly observed in autoimmune diseases and if it was a risk factor for developing these diseases. In a small subset of women with the immunological profile we evaluated the activation status of CD4+ and CD8+ cells.

Methods: We evaluated 366 women with RPL defined as 2 or more pregnancy losses and 93 control women. We defined the immune profile as the presence of 2 or more of the following abnormalities: Peripheral blood NK cell percentages >15%, positive antiphospholipid antibodies, positive antinuclear antibodies, positive anti-thyroid antibodies, low complement C3 levels and low C4 complement levels. Evolution to autoimmune diseases was detected during follow-up. Lymphocyte subsets were evaluated by flow-cytometry. Statistics: Chi-square test. Logistic regression.

Results: The prevalence of women with 2 or more immunological abnormalities was 57 out of 366 women (15.6%) and was significantly higher than in control women. Demographic clinical characteristics were similar in women with 2 or more immunological abnormalities as compared with women with only one immunological alteration or no abnormalities. The presence of the immunological profile was significantly associated with the presence of the following clinical characteristics: Leucopenia (p=0.048), lymphopenia (p=0.007), livedo reticularis (p=0.01), cutaneous rash (p=0.009), and arthritis (p=0.001). During follow-up 17 patients (4.6%) developed an inflammatory or autoimmune disease that was not present at the time of the diagnose of RPL including SLE and lupus like disease. Women with the immunological profile were at higher risk for evolution into these diseases: OR 4.19, 95% confidence interval 1.52–11.51, p=0.0055. In 10 women with the immunological profile we observed significantly higher levels of CD4+DR+ and CD8+DR+ T-cells as compared with women without the immune profile.

Conclusions: A subgroup of women with unexplained RPL are at risk of developing clinical characteristics of an inflammatory or autoimmune disease. In this regard, the immunological evaluation of women with RPL might be necessary not only to identify a potential cause of abortion but also to identify women that could require a more careful clinical follow-up. Higher CD4+DR+ and CD8+DR+ T-cells might be a pathogenic pathway leading to development of autoimmune diseases in RPL women.

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Disclosure of Interest: None declared

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FRI0284 PREDICTORS OF ARTERIAL VASCULAR EVENTS IN A COHORT OF SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Arterial vascular events (AVE) are among the major causes of morbidity and mortality in patients with Systemic Lupus Erythematosus (SLE). Several studies have been carried out to identify the main factors related to AVE in this population. The ankle brachial index (ABI) is one of the tools currently used to identify patients at greater risk of arterial events in the general population; however it has been scarcely studied in patients with SLE.

Objectives: The objectives of this prospective cohort study were to determine the predictive value of the ABI for occurrence of AVE in patients with SLE and to identify other possible factors associated with an increased risk of AVE.

Methods: 216 patients with SLE were evaluated using an ABI and followed up for 5 years. Pathological ABI is considered an ABI <0.9. Different potential vascular risk factors (traditional, non-traditional and related to SLE and/or the treatments used) were jointly evaluated. AVE: coronary events (angina pectoris, acute myocardial infarction, coronary revascularization by angioplasty or surgery), cerebrovascular events (transient ischemic attack, cerebrovascular accident), peripheral arterial disease (symptomatic intermittent claudication, distal ischemia, revascularization by angioplasty or surgery), and death related to vascular disease. Survival analysis was performed using a competitive risk regression approach, considering non-vascular death as a competitive event, to identify the predictive value of ABI and other factors studied. The Ethical Committee for Clinical Research at Cruces University Hospital approved the study protocol in accordance with the Declaration of Helsinki (CEIC E09/07). All patients signed an informed consent at the time of entry into the study.

Results: During follow-up, 4/216 (1.8%) patients were lost to follow-up. 18 AVE were identified in 17 patients, with one patient having 2 episodes of angina requiring angioplasty (4 coronary events, 11 cerebrovascular events, 2 peripheral arterial disease events and 1 sudden death) and 14 deaths (6 per AVE or their sequelae, 4 due to neoplasias and 4 due to cardio-respiratory pathology). In the competitive risk regression analysis, independent predictors of higher risk of AVE were identified: pathological ABI (subhazard ratio (SHR) 3.51, 95% confidence interval 0.96–12.79, p=0.057), family history of AVE (SHR 6.3, 95% CI 1.97–20.21, p=0.002), cumulative total prednisone (grams) (SHR 1.02, 95% CI 1.01–1.04, p=0.004) and a history of arterial thrombosis (SHR 4.60, 95% CI 1.45–14,59, p=0.010).Female gender was a protective factor for the occurrence of AVE (SHR 0.12, 95% CI 0.04–0.40, $p<0.0001$).

Conclusions: Being male, having a higher cumulative dose of prednisone, having a family history of early vascular disease and having suffered previous arterial thrombosis are independent risk predictors of an AVE in patients with SLE. Having abnormal ABI, even without statistical significance, showed a marked tendency to increase this risk despite the low number of events recorded in the studied cohort.

Disclosure of Interest: None declared

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FRI0285 LUPUS NEPHRITIS IS ASSOCIATED WITH INCREASED RATES OF HOSPITALIZATION AND IN-HOSPITAL MORTALITY COMPARED WITH NON-RENAL LUPUS AND MATCHED CONTROLS: AN ANALYSIS OF INSURANCE CLAIMS DATA

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Background: Systemic lupus erythematosus (SLE) is heterogeneous in its clinical presentation, course, and prognosis and lupus nephritis (LN) continues