carotid plaque. Predictive capacity for the presence of plaque by comparing the AUC of the different models was performed through the DeLong method

Results: 106 (38%), 85 (31%), 47 (17%) and 21 (8%) patients showed respectively SLEDAI null, low, moderate and high, 197 (71%) had a SLICC >1 and 104 (38%) a Katz>3. In 36% (99) of the patients carotid plaques were detected, with an average cIMT of 0.631±0.108 mm. SLEDAI showed a positive relationship with hypertension; the Katz with hypertension and dyslipidemia; and the SLICC with these and also with age, body mass index and abdominal waist. The relationship of the latter with the CVRF was maintained after subtracting its items related to cardiovascular risk. SLICC was univariately related to plaque (OR 1.29 [95% CI 1.13–1.48], $p=0.000$) and a SLICC >1 showed a tendency to be associated with a higher cIMT (beta coefficient 0.03 [95% CI 0.00–0.06], $p=0.053$). No univariate relationships were found between Katz or SLEDAI with subclinical atherosclerosis. The relationship of SLICC with plaque was maintained after adjusting for age, sex and CVRF (OR 1.19 [95% CI 1.00–1.42], $p=0.047$). Similarly, SLICC (even without its vascular damage items) (beta coefficient 0.26 [95% CI 0.12–0.41], $p=0.000$), but not Katz and SLEDAI, correlated significantly with SCORE. The predictive capacity of SCORE for the presence of plaque was AUC 0.788 (95% CI 0.735–0.842). Analogously SLICC showed an AUC 0.659 (95% CI 0.594–0.724) for plaque; the AUC of Katz and SLEDAI did not reach statistical significance. The AUC of the SCORE +SLICC versus SCORE did not show statistically significant differences ($p=0.31$). The statistical significance of the reclassification indexes were net reclassification index $p=0.61$, and integrated discrimination improvement $p=0.01$.

Conclusions: SLICC is independently related to the presence of plaque. SLE activity, severity and damage indexes are related to CVRF but they have little impact on the predictive capacity of SCORE for the presence of carotid plaque.

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THU0337 NONBACTERIAL THROMBOTIC ENDOCARDITIS (NBTE) IN SLE: PREVALENCE, CLINICAL CHARACTERISTICS AND SEROLOGICAL PROFILE

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Background: SLE is characterised by excessive production of various autoantibodies and correlation of these antibodies with organ involvement may help to evaluate disease severity and long term prognosis. NBTE is a rare cardiac manifestation of SLE with prevalence rate varying from 6%–11%. Many, but no all, studies have shown association of NBTE with anti phospholipid antibodies, but, except this association, data regarding clinical, laboratory and serological characteristics of NBTE is sketchy. We designed this study to evaluate profile of patients having NBTE in SLE.

Objectives: 1. To study the prevalence of NBTE in SLE patients.

2. To study association of NBTE with clinical and laboratory characteristics and serological profile.

Methods: All consecutive SLE inpatients and outpatients attending the department of Rheumatology from September 2015 to December 2017 were enrolled. Patients subjected to 2D Echo were included and their demographic, clinical, laboratory and serological profile were recorded. Serological profile was studied with Blue diver kit which is an immunodot blot assay measuring autoantibodies against 25 ENA. Anti cardiolipin and anti beta 2 glycoprotein antibody were tested by ELISA. Study was approved by an independent ethics committee [ECR/282].

Results: Total number of patients enrolled in study were 355 out of which 213 had undergone 2DEcho. NBTE was found in 33 (15.49%) patients. Among all autoantibodies studied, we found that the presence of anti-Nucleosome antibody, LAC, ACL and B2GP1 were significantly associated with NBTE ($p<0.05$). Myocarditis, valvular lesions and Pulmonary Hypertension were more common in NBTE group (p value: 0.012, <0.0001 and 0.013 respectively).

We also noticed that there is a statistically significant association between presence of NBTE with APLA syndrome and Thrombotic events (p value<0.0001 and 0.005 respectively).

Tab.1 Significant Serological association of SLE patients with NBTE.

Antibodies	SLE With NBTE-33 (15.49%)	SLE without NBTE-180	P value
Anti-nucleosome	27 (81.8)	32 (17.7)	<0.0001
LAC	16/30 (53.3)	31/149 (20.8)	0.0002
ACL (Ig M and IgG)	9/30 ^{ns}	13/128 (10.1)	0.004
B2GP-1(Ig M and IgG)	6/22 ^{ns}	9/103 (8.73)	0.033

APLA profile was available in 30 patients of NBTE and 147 patients not having NBTE. Out of this, positivity for APLA antibodies were seen in 17 (56.6%) and 36 (24.4%) patients respectively [$p<0.005$]. 82.3% patients with Anti phospholipid antibodies had APLA syndrome in NBTE group while in NBTE group 48.5%

patients having Anti phospholipid antibodies had APLA syndrome. Thus, presence of NBTE increased the possibility of developing APLA syndrome in patients having positive serology for anti phospholipid antibodies

Tab.2 Significant Clinical and laboratory characteristic of SLE patients with NBTE.

Organ involvement	SLE with NBTE-33	SLE without NBTE-180	p- value
Myocarditis	11	27	0.012
Valvulopathy	10	4	<0.0001
PAH	9	21	0.013
Thrombotic events	8	16	0.005
APLA syndrome	14	17	<0.0001

Conclusions: Presence of Anti nucleosome antibody, LAC, Anti cardiolipin and anti beta 2 glycoprotein antibodies may predict presence or future development of NBTE in SLE patients. Presence of NBTE increases probability of developing APLA syndrome in patients with anti phospholipid antibodies. We have found association of NBTE with myocarditis, valvulopathy and PAH and thus propose that such patients with NBTE should be treated early and aggressively.

Disclosure of Interest: None declared

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THU0338 OUTCOME OF STROKE IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS: A NESTED CASE-CONTROL STUDY

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Objectives: To evaluate the outcome of stroke in patients with systemic lupus erythematosus (SLE) in comparison with matched non-SLE patients.

Methods: Patients who fulfilled ≥ 4 ACR criteria for SLE and had a history of stroke were identified from our SLE database. The outcome of stroke in these patients was evaluated retrospectively and compared with a group of randomly selected age/gender-matched non-SLE patients (in a 1:3 ratio) admitted to our stroke unit within the same time period. The type and extent of stroke, atherosclerotic risk factors (hypertension, smoking, diabetes mellitus, dyslipidemia, atrial fibrillation, valvular lesions) and previous stroke were compared between the two groups of patients. The primary outcome of interest was the 90 day functional outcome as assessed by the modified Rankin scale (mRS) (score 0–2: functional independence; score 3–6: functional dependence). Secondary outcomes included all-cause mortality, 30 day stroke mortality, stroke recurrence and stroke complications. Factors independently associated with a poor functional outcome was studied by logistic regression.

Results: A total of 40 SLE patients (age 53.7±11.5, 88% women) with stroke were identified from our database (stroke prevalence 0.39/100 patient-year). A control group of 120 non-SLE patients (age 52.8±14.8, 87.5% women) with stroke were randomly selected from our stroke database. All were ethnic Chinese. The prevalence of atherosclerotic risk factors was similar between the two groups, except SLE patients had a higher atherogenic index (Log serum [triglyceride/HDL-cholesterol]) (1.51±0.47 vs 1.32±0.31; $p=0.005$). In SLE patients, the median time to stroke since diagnosis was 24 months. Ischaemic stroke was more common in SLE than non-SLE patients (90% vs 63%; $p=0.001$). Among patients with ischaemic stroke, SLE patients had more extensive infarction than controls on CAT scan (multiple infarct 65.7% vs 18.7%; $p<0.001$). The 90 day mRS score was significantly higher in SLE patients than controls (1.70±1.97 vs 0.88±1.36; $p=0.004$). Significantly more SLE patients had functional dependence (mRS score 3–6) at 90 days post-stroke than controls (32.5 vs 8.3%; $p<0.001$). Logistic regression showed that SLE was an independent risk factor for a poor stroke outcome after adjustment for age, sex, history of stroke, various atherosclerotic risk factors and the type of stroke (ischaemic vs haemorrhagic) (OR 12.2 [2.97–49.9]). Sub-group analysis of patients with ischaemic stroke showed that SLE was also independently associated with a poorer functional outcome after adjustment for the same confounding covariates and the extent of stroke (solitary vs multiple infarcts) (OR 12.4 [1.02–150]; $p=0.048$). There was no significant difference in the 30 day stroke mortality between SLE and non-SLE patients (5% vs 2.5%; $p=0.43$). However, SLE patients had a higher incidence of post-stroke epilepsy than controls (22.5% vs 3.3%; $p=0.001$). Upon a mean follow-up time of 7.5±5.2 years, SLE patients had a lower stroke recurrence free survival (59.5% vs 85.7%; $p<0.001$) and a higher rate of all-cause mortality (34.6% vs 15.1%; $p<0.001$).

Conclusions: Stroke in SLE patients is more likely to be ischaemic in origin and more extensive than matched controls. Short-term functional outcome of stroke is poorer in SLE patients. Over 7.5 years, stroke recurrence, post-stroke epilepsy and all-cause mortality is significantly more frequent in SLE than non-SLE patients.

Disclosure of Interest: None declared

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THU0339

IMPACT OF CAROTID ULTRASOUND ON THE CARDIOVASCULAR RISK STRATIFICATION OF PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Autoimmune rheumatic diseases, including systemic lupus erythematosus (SLE), are associated with a significant increase in cardiovascular morbidity and mortality. The risk stratification instruments used in the general population underestimate the true risk of events in these patients. Carotid ultrasonography, through the detection of subclinical atheromatosis, is a powerful predictor of future cardiovascular events. The available evidence, endorsed in the official Prevention Guidelines, supports the use of this technique for the adequate identification of those patients of "very high risk", candidates for preventive interventions of greater intensity.

Objectives: To analyse the cardiovascular risk profile, the prevalence of subclinical atheromatosis detected by carotid echography, and its implications in the prevention strategy in patients with SLE.

Methods: A cross-sectional study of 276 patients diagnosed with SLE. The clinical characteristics and risk profile were analysed by SCORE. The presence of plaques and intima-media thickness (cIMT) was determined by carotid ultrasound and the cIMT percentiles were calculated according to tables adjusted for age and sex. Differences in risk stratification before and after carotid ultrasonography were determined by univariate regression analysis. The therapeutic implications after reclassification were evaluated according to the 2016 European Prevention Guidelines.

Results: Risk stratification using SCORE was: low in 187 (67%), moderate in 73 (26%), and high or very high in 16 (6%). The median percentiles for cIMT were not statistically different from the p50 of healthy general population ($p=0.54$). Ultrasound showed the presence of plaque or cIMT $>p75$ or cIMT >0.90 mm in 60% (166) of the patients evaluated. The presence of this finding by risk categories was: low 102/187 (55%), moderate 55/73 (75%), high 7/9 (78%) and very high 6/7 (86%). According to the published guidelines, the detection of plaque carried out the re-stratification to a very high risk in 35% of patients. These patients where reclassification was achieved showed a higher SLICC index compared to those that did not change of category (mean difference 0.9 points, $p=0.000$). This difference remained statistically significant when the items related to cardiovascular risk that SLICC possesses were eliminated. SLEDAI and Katz were not statistically different between both groups. The SCORE of patients who were reclassified was also statistically higher (mean difference 0.7 points, $p=0.021$). Ninety percent of patients were re-classified to a very high risk had out-of-target LDL cholesterol levels for their new risk category (LDL <70 mg/dl). Similarly, only 46% of them were on statin therapy. Therefore, the indication or intensification of lipid-lowering treatment was followed only in 30% of the total evaluated.

Conclusions: The reclassification of cardiovascular risk through the use of ultrasonography in SLE occurs in one third of patients. Our data suggests that this may be consequence of the damage produced by the disease. One in three candidates needed preventive interventions of greater intensity that had not been taken.

Disclosure of Interest: None declared

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THU0340

PROLONGED REMISSION IS ASSOCIATED WITH A REDUCED RISK OF CARDIOVASCULAR DISEASE IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Cardiovascular disease (CVD) has emerged as one of the most important causes of mortality in systemic lupus erythematosus (SLE)¹. In previous studies, disease activity, as assessed by SLEDAI (at the first visit or as mean annual value registered during follow-up), did not result to have any predictive role on the subsequent occurrence of CVD²⁻³.

Objectives: To investigate the relationship between prolonged remission and the occurrence of a subsequent first CV event in patients with SLE.

Methods: Out of 452 patients consecutively admitted to two tertiary Italian centres from November 1st 2000 to December 31st 2016, the 409 patients, who, at admission, had not experienced any CV event, had not received any anticoagulation therapy and had been visited at least biannually during follow-up, were considered for the present study. Prolonged remission was defined as a 5 year consecutive period of no disease activity based on SLEDAI-2K³. Patients with

prolonged remission were furtherly subdivided according to Zen et al⁴ into 3 groups: complete remission, clinical off-corticosteroids remission (offCR), clinical on-corticosteroids remission (onCR). Kaplan-Meier curves and the log-rank test were used to analyse differences in event-free survival between groups. Cox regression analysis was used to investigate disease and therapeutic features associated with the development of a first CV event.

Results: During 72 months median follow-up time, 29 (7.0%) CV events occurred (two events in patients who had undergone prolonged remission). Out of the 409 patients, 28 patients (6.8%) achieved a prolonged complete remission, 13 (3.1%) prolonged clinical offCR and 64 (15.5%) prolonged clinical onCR. Kaplan-Meier analysis revealed a greater overall CV event-free rate in patients achieving a prolonged remission compared to those in remission but for less than 5 years and patients not in remission (logrank test $\chi^2=19.82$; $p=0.0001$; figure 1). However, at Kaplan-Meier analysis, CV outcome was similar among patients in prolonged remission, irrespective of the type of remission achieved ($p>0.05$). At multivariate analysis, treatment with hydroxychloroquine for more than 5 years and prolonged remission were protective (HR 0.38; 95% CI 0.16–0.90; HR 0.08, 95% CI 0.01–0.53) while antiphospholipid syndrome increased the risk of a first CV event (HR 3.80; 95% CI 1.68–8.61). No differences were found between patients treated or not with aspirin. Nevertheless, among patients from Rome cohort, aspirin was only prescribed to patients with high traditional CV risk score.

Conclusions: A prolonged remission, whichever the subtype, is associated with a better CV outcome and should be considered as a treat-to-target goal in the CV risk management of the lupus patient.

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THU0341

LOW VITAMIN D IS ASSOCIATED WITH THROMBOSIS IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Low vitamin D is common in systemic lupus erythematosus (SLE). It is also found in antiphospholipid syndrome. Vitamin D has effects on tissue factor, PAI-1, thrombomodulin and platelet aggregation that suggest it has an anti-thrombotic role. We asked whether low vitamin D was associated with thrombosis in SLE, adjusting for lupus anticoagulant.

Objectives: We asked whether low vitamin D was associated with thrombosis in SLE, adjusting for lupus anticoagulant.

Methods: A total of 1,392 SLE patients were included in the analysis. At the first visit when vitamin D was measured, 76.7% had levels of 25-hydroxyvitamin D <40 ng/mL. The SLE patients were: 92% female, mean age 42.9 years, and ethnicity 50% Caucasian, 41% African American. 27% patients had a history of thrombosis; 7% stroke, 4% MI and 14% DVT.

Results: Vitamin D, measured either as a continuous variable or as "low" (<40 ng/mL) vs. normal, was associated with any thrombosis and with DVT.