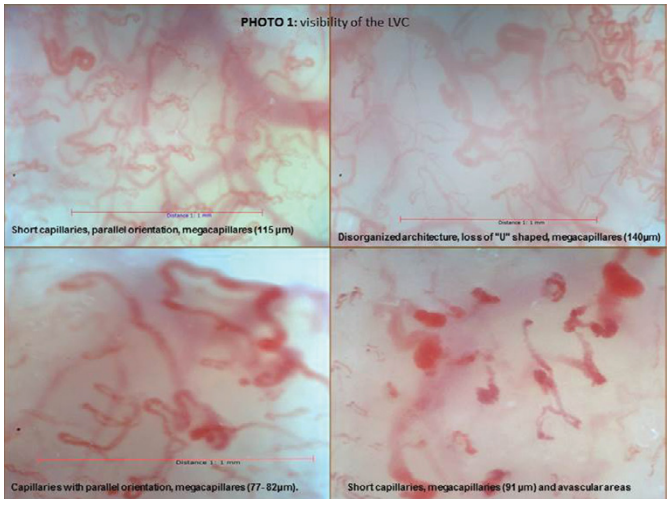
capillaries. About subpapillary venous plexus in SCL: 7 (32%) were prominent and only one had capillary hemorrhage. In contrast, none of the controls presented these alterations. (p 0.0).
According to the 3 NVC patterns the following averages were observed in the LVC:
Early Pattern (n: 8): diameter 36.93±10.84 μm; Long 191.21±47.58 μm; Density 18.12±5.33 μm.
Active Pattern (n: 11): diameter 48.80±14.80 μm; Length 184.11±29.91 μm; Density 16.72±3.25 μm.
Late Pattern (n: 3): diameter 36.27±10; Long 178.03±28.8 μm, density 19.33±4.16 μm.



Conclusions: We found that LVC in SCL patients show significant microvascular changes with respect to HC. In addition, all NVC patterns described in SCL showed similar alterations in LVC. Therefore, LVC could be a complementary or alternative method to NVC since it is easily accessible, has good visibility and is not influenced by local mechanical or chemical stimuli that can affect the nail bed.
References:
[1] W Grassi et al. Ann Rheum Dis 1993; 52 (8): 564–569.
[2] M. Cutolo et all. Rheumatology 2006; 45: 43–46.
Disclosure of Interest: None declared
DOI: 10.1136/annrheumdis-2017-eular.4329

FRI0636 ENDOTHELIAL DYSFUNCTION IN SYSTEMIC LUPUS ERYTHEMATOSUS – A CASE-CONTROL STUDY AND AN UPDATED META-ANALYSIS AND META-REGRESSION

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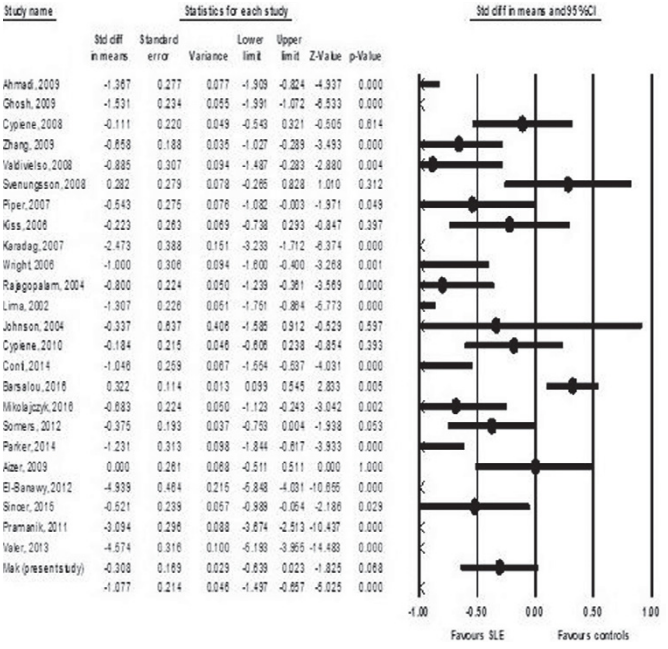
Background: Endothelium-dependent flow-mediated dilation (ED-FMD), a biophysical marker of endothelial dysfunction, is apparently impaired in patients with systemic lupus erythematosus (SLE). However, such observation is inconsistent because of the lack of standardization of the methodology of ED-FMD measurement and inclusion of patients with different comorbidities amongst different studies.
Objectives: Firstly, we evaluated if ED-FMD is indeed impaired in SLE patients naïve of cardiovascular disease and its traditional risk factors. Secondly, we aimed to determine if the putative contribution of SLE to endothelial dysfunction is in fact confounded by demographic-, disease- and treatment-related factors.
Methods: We assessed and compared the brachial artery ED-FMD (baED-FMD) using the Prosound Alpha-10 ultrasound system® between SLE patients without cardiovascular disease and cardiovascular risk factors and healthy controls (HC) matched for age, gender and body mass index (BMI). Exclusions were pregnancy, a history hypertension, diabetes mellitus, chronic kidney disease, cardiovascular and cerebrovascular diseases, and statin therapy. SLE-related disease activity and organ damage in the SLE patients were assessed using SELENA-SLEDAI and SLICC/ACR DI, respectively. With inclusion of our own data from this case-control study, we performed a comprehensive meta-analysis of case-control studies which compared baED-FMD between SLE patients and HC by determining the effect size of baED-FMD as standard mean difference (SMD). Demographic and clinical factors associated with the effect size were explored by mixed-model meta-regression.
Results: Seventy one SLE patients and 71 HC were studied, and there were 6 men in each group. The mean±SD age and BMI of SLE patients and HC were 39.21±13.4 and 40.37±12.9 years, and 22.54±5.1 and 22.86±4.2 kg/m^2, respectively. In SLE patients, the mean±SD daily prednisolone dose, SELENA-SLEDAI and SLICC/ACR DI were 13.43±14.4mg, 6.52±5.4 and 0.17±0.4, respectively. SLE patients had significantly lower baED-FMD than HC (3.72±2.8% vs 4.63±3.1%, p=0.032). In the SLE group, no association between baED-FMD and age, gender, BMI, blood pressure, duration of SLE, serum C3, C4 and anti-dsDNA levels, SELENA-SLEDAI, SLICC/ACR DI and daily prednisolone dose was found. Similarly, no association was noted between baED-FMD and age, gender and BMI in the HC group. Meta-analysis of 25 case-control studies involving 1,313 SLE patients and 1,012 HC with the random effects model revealed significantly lower baED-FMD in SLE patients compared to HC (SMD -1.077, p<0.001) (see Fig for forest plot). The presence of diabetes mellitus (p=0.04747), higher diastolic blood pressure (p=0.04419) and renal involvement (p=0.02721) were associated with more discrepant baED-FMD between both groups.



Conclusions: SLE patients naïve of cardiovascular disease and its traditional risk factors have impaired endothelial function. While SLE-related disease activity and organ damage are not apparently related to endothelial dysfunction, the presence of diabetes mellitus, renal disease and diastolic hypertension are potential contributors to endothelial dysfunction in SLE patients.
Disclosure of Interest: None declared
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FRI0637 DIAGNOSTIC PERFORMANCE OF THE NEW OMERACT CRITERIA FOR CPPD IDENTIFICATION BY US: CORRELATION WITH SYNOVIAL FLUID ANALYSIS

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Background: Ultrasonography (US) has demonstrated to be an accurate tool for the diagnosis of calcium pyrophosphate deposition disease (CPPD) (1). Recently, the OMERACT "US in CPPD" subtask force, has created new definitions for CPPD identification by US, that demonstrated to be reliable at the knee joint, bridging a gap afflicting the old definitions (2). On the other hand, synovial fluid analysis (SFA) is considered to be an accurate and valid method for diagnosing CPPD.
Objectives: The aim of this study wasto evaluate the association between US, using for the first time the new OMERACT US criteria for CPPD, and SFA findings for identifying patients affected by CPPD.
Methods: We enrolled all the consecutive patients, aged more than 60 years old, referred to our outpatient clinic from September 2016 to December 2016, for knee pain and that presented knee effusion of any grade. Patients with suspected chronic inflammatory conditions were excluded.
All the subjects underwent an US exam (EsaoteMyLab 70) of the clinically involved knee, performed by an expert sonographer that applied the new OMERACT criteria for the diagnosis of CPPD at the fibrocartilage (menisci) and hyaline cartilage of the affected knee (2).
Subsequently, a US-guided arthrocentesis was performed, and the synovial fluid was collected and analyzed by a compensated polarized light microscopy (AxioLab A.1 [Zeiss]) by an expert observer in order to assess the presence of CPP crystals. Both observers were blinded to clinical and to each other findings. The Chi-squared test was used to correlate the US and SFA findings.
Results: 49 patients (28 women) were enrolled in the study, with a mean age of 70,29yo (SD±10,93). 28 subjects were affected by CPPD at SFA and 26 patients