

Sweden). Data on clinical manifestations of patients as well as self-reported information on RP of HBD were available.

**Results** Significantly higher proportion of subjects with SSc than SLE, pSS and HBD had aab against Scl-70, CENP-A, CENP-B, RNA polymerase-III 11kDa, RNA polymerase-III 155kDa, PM-Scl100, PM-Scl75 and Ku (Figure 1). No significant difference in prevalence was seen regarding aab against fibrillarin, NOR90, Th/To or PDGFR. Anti-Ro52/SSA was found in a higher proportion of patients with pSS (80.2%) and SLE (41.1%) than in SSc (22.8%). Among patients with SLE, anti-NOR90 was associated with discoid lupus ( $p=0.025$ ) whereas anti-CENP-A was inversely associated with hematological disorder ( $p=0.005$ ) and photosensitivity ( $p=0.024$ ). Anti-CENP-A was inversely associated with mucocutaneous (ACR criteria 1–4, merged) involvement ( $p=0.014$ ). Anti-CENP-B was significantly associated with serositis ( $p=0.005$ ), anti-Ku with lupus nephritis ( $p=0.007$ ) and anti-Ro52/SSA with neurological disorder ( $p=0.021$ ). Among patients with SSc, 50/57 (87.7%) tested positive for  $\geq 1$  specificity and 6 of the 7 (85.7%) immunoblot negative patients were ANA positive with immunofluorescence microscopy. Pulmonary fibrosis was associated with anti-Scl-70 ( $p=0.008$ ), anti-RNA polymerase-III 11kDa ( $p=0.003$ ) and anti-RNA polymerase-III 155kDa ( $p=0.003$ ). Pulmonary arterial hypertension was associated with anti-CENP-A ( $p=0.05$ ). Among HBD, aab against RNA polymerase-III 155kDa ( $p=0.027$ ) and PM-Scl100 ( $p=0.018$ ) were associated with RP.

**Conclusions** We demonstrate that the 13 aab included in the Systemic Sclerosis Profile immunoassay are commonly detected among patients with SSc, but they are also frequent among individuals with other diseases characterized by type I IFNs. This information is important to convey to clinicians, especially as patients may present with similar manifestations or overlap syndromes. In SLE, we observed associations between clinical manifestations and SSc-associated aab which have not previously been reported.

**PO.2.46 CLINICAL AND IMMUNOLOGICAL CONSIDERATIONS OF CERULOPLASMIN ACTIVITY SHIFTS IN SYSTEMIC LUPUS ERYTHEMATOSUS**

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10.1136/lupus-2022-elm2022.76

**Background** Ceruloplasmin is an oxidoreductase considered to be a key intracellular antioxidant factor that substantially contributes in SLE pathogenesis. There is disequilibrium between ROS production and disposal in SLE shifted to accumulation of toxic products of the free radical reactions. The origin of such imbalance still remains unclear. Production of autoantibodies to ceruloplasmin and other antioxidant enzymes could be putative source of their dysfunction.

**Purpose** Assessment of interrelations between oxidase activity of ceruloplasmin, anti-ceruloplasmin antibodies presence and basic clinical and laboratory parameters of SLE with the use of ceruloplasmin immobilized on the magnetic beads.

**Methods** The research was conducted according to the WMA Helsinki Declaration after approval of the local ethics committee. 63 SLE patients were included in the research when admitted to rheumatology unit of Volgograd Municipal Hospital of Emergency Care #25. The diagnosis was verified using

EULAR/ACR classification criteria (2019). Serum samples were collected after inclusion as well as before the discharge. Disease activity was assessed by means of ECLAM index. 30 healthy volunteers were included in the reference group. Anti-ceruloplasmin antibodies were detected by ELISA using ceruloplasmin coated magnetic polyacrylamide beads that have been made by original technology. Oxidase ceruloplasmin activity was measured using paraphenylenediamine oxidation technique. The values were expressed as optical density units (ODU). Results were expressed as means  $\pm$  standard deviations.

**Results** Mean ECLAM index in SLE group was  $10.2 \pm 6.7$  points. Mean anti-ceruloplasmin antibody value in the reference group was  $0.020 \pm 0.014$  ODU. None of individual values was outside reference interval ( $M+3SD$ ) meaning that there were no antibody positive cases in the reference group. 30 (47.6%) SLE patients were demonstrated serum anti-ceruloplasmin antibodies, and its mean concentration was  $0.134 \pm 0.026$  ODU. Ceruloplasmin activity in anti-ceruloplasmin antibody positive SLE patients was significantly lower than in antibody negative patients ( $1.234 \pm 0.315$  ODU and  $1.822 \pm 0.154$  ODU, respectively,  $p < 0.001$ ). SLE activity positively correlated with anti-ceruloplasmin antibody concentration in contrast to its negative correlation with ceruloplasmin activity. Moderate but significant increase of ceruloplasmin activity and decrease of the antibody concentration were found after in-hospital treatment.

**Conclusion** Anti-ceruloplasmin antibodies, which can be found in a large proportion of SLE patients, are eventual inhibitors of ceruloplasmin oxidase activity, thereby leading to insufficiency of the extracellular portion of the antioxidant system. The study of antibody formation to ceruloplasmin, as well as its enzymatic activity, expands the existing understanding of SLE pathogenesis and outlines ways for further research in the field of immunological considerations of antioxidant system.

**PO.2.47 HOW SMALL DETAILS AFFECT THE SENSITIVITY OF DIFFERENT SLE CRITERIA? INVESTIGATING A LARGE NUMBER OF PATIENTS IN A HUNGARIAN CENTER**

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10.1136/lupus-2022-elm2022.77

**Introduction** The new 2019 EULAR/ACR classification criteria includes compulsory ANA positivity as an entry criterion and contains 7 clinical and 3 immunologic domains. Each domain involves different clinical signs followed by weighted score from 2 to 10.

**Aim** To assess the performance of the 2019 European League Against Rheumatism/American College of Rheumatology (EULAR/ACR) classification criteria for SLE patients against the ACR 1997 and the SLICC 2012 criteria.

**Method** We performed a retrospective observational study between 2018.01.01. and 2021.04.27. from 382 patients with lupus. The diagnosis of SLE was established by the rheumatologist in routine care and these diagnosis rates were compared against those that were determined based on the three classification criteria to identifying the sensitivities.

**Results** Among the patients the ACR 1997 sensitivity was 81% (310 patients) and the SLICC 2012 criteria achieved 95% sensitivity (361 patients). The 2019 EULAR/ACR