age at disease onset 52±5 years; median disease duration, range: 10, 0-30; group B). Clinical and laboratory data were collected through an extensive clinical chart review. All parameters were compared by chi-square or Fisher's exact test, when appropriate.

Results: The two pSS groups had similar frequencies of non-specific clinical findings (chronic fatigue, arthralgias-myalgias, arthritis, Raynaud's phenomenon), periepithelial manifestations (interstitial nephritis, lung and liver disease), splenomegaly, leucocyte and neutrophil counts. However, patients with disease onset ≤35 years old, exhibited increased proportion of salivary gland enlargement (SGE; 43.8% vs 25.4%, $p=0.003$), lymphadenopathy (18.2% vs 7.6%, $p=0.016$), palpable purpura (20.3% vs 9.8%, $p=0.025$), anti-Ro/SSA antibodies (90.2% vs 74%, $p=0.001$), rheumatoid factor positivity (73.3% vs 53.6% $p=0.002$), low C4 levels (64.5% vs 42.4%, $p=0.001$) and NHL (18% VS 8.3%, $p=0.028$).

Conclusion: Our findings suggest that young patients with pSS display increased prevalence of systemic features, B cell hyperreactivity, as well as heightened risk for lymphoma development. Further prospective studies with a larger number of patients are needed to address whether early disease onset may also serve as an additional risk factor for NHL development.

REFERENCES:

- [1] Anquetil C et al, Rheumatology, 2019

Acknowledgement: The project was supported by the EU grant "HarmonicSS" (grant agreement no: 731944)

Disclosure of Interests: Ourania Argyropoulou: None declared, Andreas Goules: None declared, Evangelia Zampeli: None declared, Maria Mavromati: None declared, Clio Mavragani: None declared, Fotini Skopouli: None declared, Haralampos M. Moutsopoulos: None declared, Athanasios Tzioufas Grant/research support from: ABBVIE, PFIZER, AMGEN, NOVARTIS, GSK

DOI: 10.1136/annrheumdis-2019-eular.7105

FRI0223

EXTRACELLULAR VESICLES AS A SOURCE OF BIOMARKERS IN SJÖGREN'S SYNDROME: A SWATH-MS PROTEOMIC APPROACH

Chiara Baldini¹, Francesco Finamore², Francesco Ferro¹, Marta Mosca¹, Stefano Bombardieri¹, Silvia Rocchiccioli², Antonella Cecchetti¹. ¹University of Pisa, Department of Clinical and Experimental Medicine, Pisa, Italy; ²Institute of Clinical Physiology, CNR, Pisa, Italy

Background: Primary Sjögren's syndrome (pSS) is a multifactorial autoimmune disorder characterized by lymphocytic infiltration of the exocrine glands. In the recent past several proteomic studies attempted to look at valid biomarkers for pSS in whole saliva, however little is known about the composition of salivary extracellular vesicles (EVs), nor to what extent their content may reflect the phenotypic state of the disease.

Objectives: In this study, we search for pSS specific biomarkers by using a sequential window acquisition of all the theoretical fragment ion spectra (SWATH-MS) approach to monitor the dynamics of saliva EVs sub-proteome of pSS patients compared to healthy controls.

Methods: We included patients with a diagnosis of pSS made according to the AECG 2002 criteria and healthy volunteers as controls. Saliva was collected under standardized conditions. EVs were enriched by sequential ultracentrifugation steps from saliva samples. Peptide identification and quantitation was performed by matching SWATH data against an assay library of MS/MS spectra created from a previously acquired data-dependent acquisition (DDA) method. GO terms and protein-protein interaction network analysis were performed using Cytoscape software.

Results: We included 20 pSS patients (AECG 2002 criteria) and 10 healthy subjects. Quantitative data evidenced a distinct separation between the patient group and control group, indicating that pSS may modulate the phenotype of protein cargoes of salivary EVs. The majority of the proteins up-regulated in pSS compared to controls were found to be involved in several inflammatory processes. Particular emphasis was given to proteins converging to IL-12 signaling that included annexin A2, cofilin, macrophage migration inhibitory factor (MIF), S100A8-A9 and plasmin-2 proteins.

Conclusion: Our results revealed that the inflammatory phenotype observed in pSS patients is also extended to salivary EVs, which protein content may represent a novel source for potentially useful biomarkers for pSS.

Disclosure of Interests: Chiara Baldini: None declared, Francesco Finamore: None declared, Francesco Ferro: None declared, Marta Mosca Paid instructor for: GlaxoSmithKline, Lilly, UCB, Stefano Bombardieri:

None declared, Silvia Rocchiccioli: None declared, Antonella Cecchetti: None declared

DOI: 10.1136/annrheumdis-2019-eular.6302

FRI0224

PREVALENCE OF SJÖGREN'S SYNDROME IN THE COMMUNITY OF MADRID

Jaime Barrio Cortes¹, Tomás Gómez Gascón¹, M.ª Dolores Esteban Vasallo², Isabel Del Cura González³, Juan Antonio López Rodríguez³, Ana Clara Zoni², María Felicitas Domínguez Berjón². ¹Fundación de Investigación e Innovación Biomédica de Atención Primaria, Madrid, Spain; ²Dirección General de Salud Pública, Madrid, Spain; ³Unidad de Apoyo a la Investigación de la Gerencia de Atención Primaria, Madrid, Spain

Background: Several studies on the epidemiology of autoimmune diseases performed within the past several decades revealed a prevalence of Sjögren Syndrome (SS) between 0.3% and 4.83% (1). More recent studies revealed a lower prevalence between 31/100,000 to 49/100,000 (2,3). The exact prevalence of SS is unknown due to the heterogeneity of the populations and geographic areas studied, the utilization of different diagnostic tests or the lack of a unique classification criteria for the disease. Also, the disease may have an insidious onset and a variable course with a broad spectrum of clinical manifestations, so the diagnosis may be delayed or SS patients may be missed and misclassified as other rheumatic disease. Besides, SS can occur alone (primary SS) or in association with other specific systemic autoimmune rheumatic diseases (secondary SS).

Objectives: The aim of our study was to determine the prevalence of SS in the Community of Madrid (CM) and to describe the sociodemographic and clinical characteristics of these patients.

Methods: Population-based cross-sectional study in the CM, Spain. The information source for SS cases was the Registry of rare diseases in the CM (SIERMA).

A descriptive analysis of the main sociodemographic and clinical characteristics of SS cases was performed.

Prevalence per 10,000 inhabitants in people with 18 years of age and over, stratified by sex and their 95% confidence intervals (CI) were calculated for 2015. The denominator was the people registered at the Population Register in the middle of the period (July 2015).

Results: There were 4,778 cases of SS in SIERMA and 389 (8.1%) of them were already dead. 4434 (92.8%) were women. The median age was 64.7 years (15.4), and the maximum age was 103 years. The disease was most frequent in the sixth decade with 1079 cases (22.6%), in the seventh decade with 1120 cases (23.4%) and in the eighth decade with 935 cases (19.6).

3116 cases (65.2%) were classified as primary SS (pSS) and 1662 (34.8%) as secondary SS (sSS).

Among the sSS the main rheumatological conditions associated were rheumatoid arthritis (58%), lupus (24.5%), systemic Sclerosis (10.5%); mixed connective tissue (4%), inflammatory muscle disease (2%) and vasculitis (1%).

The prevalence of SS in adults (≥ 18 years of age) was 8.4/10,000 with a 95% CI: 8.2 – 8.7 (14.9% in women and 0.8% in men). The prevalence of pSS was 5.5/10,000 (CI 5.3 – 5.7) and for sSS was 2.8/10,000 (95%CI: 2.7-3).

Conclusion: SS mainly affects females during the sixth, seventh and eight decades of life, and shows a female:male ratio of 9:1. Two out of three cases of SS identified were classified as pSS. The main rheumatological conditions associated were rheumatoid arthritis and lupus. The estimated prevalence of SS in the Community of Madrid population is lower than the observed in previous studies whereas the prevalence of pSS is similar than the observed in current studies.

REFERENCES:

- [1] Toms "ic" M, Logar D, Grmek1 M, Perkovic T, Kveder T. Prevalence of Sjögren's syndrome in Slovenia. Rheumatology. 1999;38:164-70.
- [2] Sardu C, Cocco E, Mereu A, Massa R, Cuccu A, Marrosu MG, et al. Population Based Study of 12 Autoimmune Diseases in Sardinia, Italy: Prevalence and Comorbidity. Ashour HM, editor. PLoS One [Internet]. 2012 Mar 2;7(3):e32487. Available from: <http://dx.plos.org/10.1371/journal.pone.0032487>
- [3] Prevalencia de las enfermedades raras: Datos bibliográficos », Informes Periódicos de Orphanet, Serie Enfermedades Raras, Enero 2019, Número 1 : Listado por orden alfabético de enfermedades o grupo de enfermedades http://www.orpha.net/orphacom/cahiers/docs/ES/Prevalencia_de_las_enfermedades_raras_por_orden_alfabetico.pdf

Disclosure of Interests: None declared
DOI: 10.1136/annrheumdis-2019-eular.3949

FRI0225

THE EULAR/ACR 2018 AND SLICC 2012 HAVE INCREASED SENSITIVITY AGAINST THE ACR 1997 CLASSIFICATION CRITERIA AND CLASSIFY NON-OVERLAPPING GROUPS OF SLE PATIENTS: SIMULTANEOUS APPLICATION ASSURES THE GREATEST CAPTURE OF PATIENTS IN CLINICAL PRACTICE

Christina Adamichou¹, Dionisis Nikolopoulos², Irini Genitsaridi³, Alessandra Bortoluzzi⁴, Antonis Fanouriakis², Emmanouil Papastefanakis¹, Eleni Kalogiannaki¹, Irini Gergianaki¹, Prodromos Sidiropoulos¹, Dimitrios Boumpas², George Bertias¹. ¹Rheumatology, Clinical Immunology and Allergy, University of Crete, Heraklion, Greece; ²Rheumatology Clinic, 'Attikon' University Hospital and BRFAA, Athens, Greece; ³Institute of Computer Science, Foundation for Research and Technology Hellas (FORTH), Heraklion, Greece; ⁴Section of Rheumatology, University of Ferrara, Cona (FE), Italy

Background: A joined EULAR/ACR initiative has proposed a new set of classification criteria for SLE based on weighted items and the use of ANA as an entry criterion.

Objectives: To compare the diagnostic performance of the old and new classification criteria against physician diagnosis in an early SLE cohort and examine phenotypic and prognostic differences among patients who are classified with the criteria.

Methods: Adult patients diagnosed by experienced physicians with SLE (n=690) or control diseases (n=301) during 2005-2016 and followed-up at least 6 months. All sets of criteria (ACR 1997, SLICC 2012, EULAR/ACR 2018) were applied. Hazard models were used to calculate elapsed time between the earliest item (of any criterion) and classification. Severity of SLE (BILAG-2004 glossary) and the SLICC/ACR organ damage index were determined.

Results: The SLICC and EULAR/ACR had increased overall sensitivity as compared to the ACR criteria (91.3%, 88.6%, 85.7%, respectively; p<0.01), especially in early-onset (<3 years) disease (91.4%, 87.3%, 79.9%, respectively; p<0.001), with comparable specificity rates (ranging 91.0–92.7%). By combining the three criteria sets, 97.1% of patients were classified. Both the EULAR/ACR and the SLICC enabled earlier SLE classification (median time-to-classification: 7.1 and 7.6 months, respectively) than the ACR criteria (median 9.1 months). Nevertheless, disease classification was delayed by >3 months in 17.3–19.9% of cases, particularly in neurological SLE (20.0–26.8%). Comparative analysis of patients who were missed by the criteria revealed significant differences in rates of individual clinical and serological features (Table 1) suggesting that existing criteria may classify non-overlapping groups of patients. Importantly, unclassified patients presented with a high prevalence of moderate/severe disease (43.3–60%) and organ damage (30–50%).

Conclusion: Despite improved sensitivity and earlier classification with the EULAR/ACR and the SLICC criteria, still SLE diagnosis may be missed or delayed even in patients with moderate to severe disease, especially neurological-dominant disease. Simultaneous application in clinical practice assures the greatest capture of patients.

Table 1. Prevalence of clinical and immunological features across groups of SLE patients who were not classified by the criteria

	Missed by the				P value
	ACR 1997	SLICC 2012	EULAR/ACR 2018	All three criteria	
	n=99	n=60	n=79	n=20	
SLICC 2012 items					
ACLE	49.5%	80.0%	72.2%	60.0%	<0.001
CCLE	10.1%	8.3%	17.7%	5.0%	0.206
Alopecia	42.4%	36.7%	63.3%	45.0%	0.008
Ulcers	12.1%	23.3%	51.9%	15.0%	<0.001
Synovitis	69.7%	86.7%	74.7%	65.0%	0.076
Serositis	6.1%	10.0%	12.7%	10.0%	0.506
Renal disorder	3.0%	3.3%	6.3%	10.0%	0.455
Neurologic disorder	8.1%	6.7%	6.3%	20.0%	0.232
Hemolytic anemia	3.0%	0.0%	2.5%	0.0%	0.503
Leukopenia	20.2%	15.0%	27.8%	10.0%	0.166
Thrombocytopenia	18.2%	6.7%	12.7%	10.0%	0.205
Anti-DNA	18.2%	3.3%	0.0%	0.0%	<0.001
Anti-Sm	2.0%	0.0%	1.3%	0.0%	0.664
Anti-phospholipid Ab	18.2%	1.7%	11.4%	5.0%	0.011
Low complement	43.4%	3.3%	21.5%	5.0%	<0.001
Coombs test	5.1%	0.0%	2.5%	0.0%	0.232
ANA	84.8%	56.7%	44.3%	50.0%	<0.001

Acknowledgement: This study received funding by the Hellenic Society of Rheumatology & Professionals Union of Rheumatologists of Greece (protocol number 644).

Disclosure of Interests: Christina Adamichou: None declared, Dionisis Nikolopoulos: None declared, Irini Genitsaridi: None declared, Alessandra Bortoluzzi: None declared, Antonis Fanouriakis Paid instructor for: Amgen, GSK, Speakers bureau: Abbvie, Enorasis, Genesis Pharma, Emmanouil Papastefanakis: None declared, Eleni Kalogiannaki: None declared, Irini Gergianaki: None declared, Prodromos Sidiropoulos: None declared, Dimitrios Boumpas: None declared, George Bertias: None declared

DOI: 10.1136/annrheumdis-2019-eular.6136

FRI0226

LOW EXPRESSION OF ESTROGEN RECEPTOR BETA IN RENAL TUBULAR EPITHELIAL CELL MAY CONTRIBUTE TO HYPERURICEMIA IN PREMENOPAUNTED STATES OF AMERICAL FEMALE SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

Haijun Liu^{1,2}, Xiaoyan Cai^{3,4}, Lie Dai⁵, MA Jianda⁵, Yingqian Mo⁵, Minyan Xie¹.

¹Panyu Central Hospital, Department of Rheumatology, Guangzhou, China; ²Jinan University, Guangzhou, China; ³Guangzhou First People's Hospital, Department of Rheumatology, Guangzhou, China; ⁴The Second Affiliated Hospital of South China University of Technology, Guangzhou, China; ⁵Sun Yat-Sen Memorial Hospital, Sun Yat-Sen University, Department of Rheumatology, Guangzhou, China

Background: We have reported that the incidence of hyperuricemia of young female systemic lupus erythematosus (SLE) patients was higher than that of healthy young women^[1]. Whether the estrogen receptor (ER) expressed in renal tubular tissue contributes to it? There are few reports yet.

Objectives: To investigate the expression of ERs in the renal tubular cells and their relationship with serum uric acid (UA) levels in premenopausal female SLE patients.

Methods: Eighteen kidney biopsy specimens of premenopausal female SLE patients served as the lupus nephritis group (LN group), and 12 specimens of premenopausal female IgA nephropathy patients served as the IgA group. Serum UA levels and kidney index were collected, and the expression of ERs in the renal tubular epithelial cell of the two groups were determined by immunohistochemistry. According to the