SAT0212

OBSTETRIC AND THROMBOTIC ANTIPHOSPHOLIPID SYNDROME: SIMILAR ANTIBODIES BUT DIFFERENT PHENOTYPES?H. Jiang¹, Y. Zhao¹, C. H. Wang¹, J. Zhao¹. ¹Peking Union Medical College Hospital, Rheumatology, Beijing, China

Background: Several studies showed two main clinical phenotypes of antiphospholipid syndrome which could be independent, but only a few data contrast features between these two groups.

Objectives: To investigate whether obstetric and thrombotic manifestations of APS are independent subtypes.

Methods: This was a single center prospective study from the PUMCH database of primary antiphospholipid syndrome followed for over 4 years. Comparing demographic data, laboratory tests, pregnancy morbidity and thrombotic events during follow-up between IoAPS (isolated obstetric APS) and ItAPS (isolated thrombotic APS).

Results: A total of 244 patients was registered in PUMCH primary APS cohorts, 157(64.34%) were female patients. In female patients, 44(28.03%) were diagnosed with IoAPS, 42(26.75%) were ItAPS. Demography showed patients in ItAPS group were older than IoAPS group (40 vs 33, $p<0.001$), presented more cardiovascular risks (33.33% vs 6.8%, $p<0.01$), neurological disorders (23.8% vs 2.3%, $p<0.01$) and thrombocytopenia (47.6% vs 20.5%, $p<0.01$). Antibody profiles had no difference in triple positivity, double positivity and partial single positivity (ACL, LA), but presence of single anti- β 2GPI positivity showed significant difference between IoAPS and ItAPS (59.09% vs 38.1%, $p<0.05$). Significant difference was presented in homocysteine (Median) between IoAPS and ItAPS (9.9 vs 11.5, $p<0.05$), not in inflammatory markers. During 49.5 (Median) months follow-up of ItAPS group, patients got 90 pregnancies, 5 abortions but weren't fulfilled with the diagnosis criteria of pregnancy morbidity. No thrombotic event occurred during 48.5 (Median) months follow-up time in IoAPS group.

Conclusion: IoAPS and ItAPS shared similar antibody profile, but presented isolated clinical complications, different demographic features and maintained independent manifestation during follow-up, indicating the underlying pathogenesis are different.

Table 1. Demographic characteristics

	IoAPS(n=44)	ItAPS(n=42)	P-value
Age, years, Median (Q1-Q3)	33 (30.00, 36.00)	40(33.75, 55.25)	.00
B.M.I. Median (Q1-Q3)	22.86 (20.70,24.45)	23.52 (21.44, 27.70)	.10
Flow-up time, month, Median (Q1-Q3)	48.50 (36.00,77.00)	49.50 (23.00,103.75)	.44
Smoke (n%)	1(2.27)	0(0)	1.00
Cardiovascular risk factors (n%)	3 (6.82)	14 (33.33)	.00
Coronary heart disease	0(0)	2(4.76)	.24
Hypertension	1(2.27)	5(11.90)	.11
Obesity	2(4.55)	9(21.43)	.03
Diabetes mellitus	0(0)	0(0)	.00
Complications (n%)	16 (36.36)	30 (71.43)	.00
Kidney diseases	2(4.55)	3(7.14)	.67
Thrombocytopenia	9(20.45)	20(47.62)	.01
Neurological Disorders	1(2.27)	10(23.81)	.00
Stroke	0(0)	8(19.05)	.00
Non stroke CNS manifestations	1(2.27)	2(4.76)	.61
Valvular heart diseases	4(9.09)	2(4.76)	.68
Failed pregnancy during follow-up (%)	116/154(75.32)	5/90(5.56)	.00
Thrombosis during follow-up (n%)	0(0)	4(9.52)	.05

Table 2. Laboratory tests

	IoAPS(n=44)	ItAPS(n=42)	P-value
Antibody categories			
Triple positive (n%)	11(25.00)	15(35.71)	.35
ACL+ β 2GPI+LA			
Double positive (n%)	7(15.90)	11(26.19)	.29
LA+ACL	0(0)	1(2.38)	.49
LA+anti- β 2GPI	2(4.55)	3(7.14)	.67
ACL+anti- β 2GPI	5(11.36)	7(16.67)	.55
Single positive (n%)	26(59.10)	16(38.10)	.04
ACL	1(2.27)	1(2.38)	1.00
anti- β 2GPI	23(52.27)	10(23.81)	.01
LA	2(4.55)	5(11.90)	.26
Negative after treatment	4(9.09)	1(2.38)	.36
ESR	10(6, 27)	9(4, 16)	.06
CRP	1.03(0.56, 3.85)	1.11(0.43, 3.18)	.63
Hcy	9.9(8.10, 12.10)	11.5 (9.30, 14.65)	.04

* aCL: anticardiolipin antibodies; anti- β 2-GPI: anti- β 2 glycoprotein I antibodies; LA: lupus anticoagulant; ESR: erythrocyte sedimentation rate; CRP: C-reactive protein; Hcy: homocysteine.

References:

- [1] Meroni P L, Borghi M O, Grossi C, et al. Obstetric and vascular antiphospholipid syndrome: same antibodies but different diseases?[J]. *Nat Rev Rheumatol*, 2018, 14(7): 433-440

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SAT0213

IMPACT OF FLARES ON HEALTHCARE RESOURCE USAGE AND PROS IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

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Background: The effect of flares on healthcare resource usage and patient-reported outcome scores in SLE patients is not well quantified.

Objectives: To understand how flares impact healthcare resource utilization (HCRU) and patient-reported outcomes amongst an international real-world dataset of SLE patients.

Methods: The Adelphi Real World 2015 Lupus Disease Specific Programme (DSP) is a cross-sectional study of 263 rheumatologists in the US and EU5. Rheumatologists were asked to complete patient record forms (PRFs) for the next 5 prospectively consulting SLE patients; the same patients were asked to complete patient self-completion (PSC) forms describing how SLE affected them. PRFs collected data pertaining to the patient's diagnosis, disease history, current clinical outcomes, treatment and management history. PSCs collected similar data and included patient-reported outcome measures (PROs) to assess humanistic burden. Propensity score matching was used to assess differences in HCRU and health status between SLE patients who had flared (physician defined) in the last 12 months and those who had not. Matching variables were patient ethnicity, time since diagnosis, and severity at diagnosis. Data were extracted from 1278 PRFs, and 591 PSCs. Propensity score matching was carried out on two matched groups of 408 patients.

Results: Demographic data are reported in Table 1. Propensity score matching showed patients who flared in the last 12 months experienced significantly greater hospitalizations, visits to the ER, and total HCP consults in the last 12 months. Significantly greater drug burden lower physician and patient satisfaction, lower EQ-5D score (worse health status), lower FACIT Fatigue score (greater fatigue), and greater overall work impairment (Table 2) were also observed.

Table 1. Demographic data

Variable	Flared in last 12 months	Not flared in the last 12 months
Mean age (years)	41.8	42.4
% Female	86.0	87.0
% White/Caucasian	66.2	76.3
Mean years diagnosed	5.9	5.4

Table 2. Propensity score matching results

Outcome variable	Flared mean	Not flared mean	Coefficient	95% CI	p-value
Hospitalisations in last 12 months	24.26	7.63	0.17	[0.12 – 0.21]	<0.001
Emergency department visits in last 12 months	20.83	4.19	0.17	[0.12 – 0.21]	<0.001
Number of tests in last 12 months	46.49	38.90	7.59	[3.74 – 11.44]	<0.001
Number of current medications	2.76	2.19	0.57	[0.43 – 0.72]	<0.001
Physician satisfied	64.46	86.63	-0.22	[-0.28 – -0.17]	<0.001
Patient satisfied	69.29	85.09	-0.16	[-0.24 – -0.08]	<0.001
EQ-5D-3L	0.72	0.83	-0.11	[-0.15 – -0.07]	<0.001
FACIT Fatigue	30.06	36.48	-6.42	[-8.5 – -4.3]	<0.001
WPAI overall percentage work impairment	42.74	30.23	12.5	[7.51 – 17.50]	<0.001

Conclusion: The analysis of international real-world data confirmed that SLE patients who flared in the last year represent a greater burden on healthcare resource and demonstrate significantly worse health status, greater fatigue, lower

patient and physician satisfaction and greater overall work impairment compared with non-flaring patients. There is a need for more effective treatments in this patient population to reduce patient and healthcare burden.

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SAT0214

ULTRASONOGRAPHIC CHANGES OF SALIVARY GLANDS IN PRIMARY SJÖGREN'S SYNDROME: A LONGITUDINAL PROSPECTIVE STUDY

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Background: In the diagnosis of primary Sjögren's syndrome (SS), salivary gland ultrasound is useful tool. Until now, there is no data for ultrasonographic changes of major salivary glands over time.

Objectives: This study aimed to evaluate the changes in abnormalities of salivary gland ultrasound (SGUS) over time in patients with pSS.

Methods: Patients with pSS (n=70) and idiopathic sicca syndrome (n=18) underwent SGUS twice at baseline and 2 years later. The semi-quantitative SGUS score (0-48) was used, which comprises five parameters: parenchymal echogenicity, homogeneity, hypoechoic areas, hyperechogenic reflections, and clearness of posterior borders. The intraglandular power Doppler signal (PDS) was also assessed. The changes of these SGUS variables were compared in patients with pSS and idiopathic sicca syndrome.

Results: The median (interquartile range) total SGUS scores at baseline was 27 (14) in patients with and 4 (3) in those with idiopathic sicca syndrome ($p<0.001$). In the pSS group, the total SGUS scores and the SGUS scores for bilateral parotid glands were significantly increased during median 23.4 month follow-up ($p=0.013$ and $p=0.011$, respectively). Homogeneity and hypoechoic areas were the domain to show statistically significant progression of SGUS scores. None of the SGUS scores changed significantly in the patients with idiopathic sicca syndrome. In patients with pSS, baseline and follow-up PDS sum scores of four salivary glands were significant higher in worsening SGUS group (n=13) than no change/improvement SGUS group (n=55/2).

Conclusion: The structural abnormalities in major salivary glands assessed using SGUS scores progressed significantly in patients with pSS. In pSS group, 18.6% patients had worsening SGUS scores during 2 years. Intra-glandular hypervascularity was associated with worsening of salivary gland abnormalities.

References:

- [1] Delli K, Dijkstra PU, Stel AJ, Bootsma H, Vissink A, Spijkervet FK. Diagnostic properties of ultrasound of major salivary glands in Sjögren's syndrome: a meta-analysis. *Oral diseases*. 2015;21(6):792-800.
- [2] Jousse-Joulin S, Devauchelle-Pensec V, Cornec D, Marhadour T, Bressollette L, Gestin S, et al. Brief Report: Ultrasonographic Assessment of Salivary Gland Response to Rituximab in Primary Sjögren's Syndrome. *Arthritis & rheumatology* (Hoboken, NJ). 2015;67(6):1623-8.
- [3] Gazeau P, Cornec D, Jousse-Joulin S, Guillec D, Saroux A, Devauchelle-Pensec V. Time-course of ultrasound abnormalities of major salivary glands in suspected Sjögren's syndrome. *Joint, bone, spine: revue du rhumatisme*. 2018;85(2):227-32.
- [4] Lee KA, Lee SH, Kim HR. Diagnostic and predictive evaluation using salivary gland ultrasonography in primary Sjögren's syndrome. *Clinical and experimental rheumatology*. 2018;36 Suppl 112(3):165-72.

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SAT0215

HISTORY OF TONSILLECTOMY IS ASSOCIATED WITH GLANDULAR INFLAMMATION IN SJÖGREN'S SYNDROME

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Background: The palatine tonsils are secondary lymphoid-organs that serve as the first line of defense against pathogens. Whether history of tonsillectomy (TE) is associated with the phenotype of Sjögren's syndrome (SjS) has not been investigated to date.

Objectives: To test whether TE is linked to SjS phenotype and disease activity scores.

Methods: A total of 183 patients from the Optimising Assessment in Sjögren's Syndrome (OASIS) cohort with SjS or non-SjS sicca syndrome were analysed. Patients with SjS fulfilled 2016 ACR/EULAR classification for primary SjS; sicca patients had objective and/or subjective dryness, but were anti-Ro/SSA negative and had no physician diagnosis of SjS. One SjS patient who had TE around the time of symptom onset was excluded.

Results: Of the total cohort, 116 were diagnosed with SjS (86.2% SSA/Ro positive) and 67 with non-SjS sicca syndrome. Overall, 29% (53/183) had TE; 24.1% of the SjS patients (28/116) and 37.3% of the sicca patients (25/67). The prevalence of TE was higher in sicca than in SjS ($p=0.043$). The median age at TE was 8 (range 3-50) years and did not differ between SjS and sicca patients ($p=0.629$). Neither age at first symptoms ($p=0.093$) nor disease duration ($p=0.623$) were associated with TE in patients with SjS. SjS patients with TE showed a higher average histological focus score (2.1 (1.2-2.8) vs. 1.3 (0.0-4.3); $p=0.049$), and were more likely to have activity in the glandular (53.6 vs. 20.5%; $p=0.001$) and constitutional (39.3 vs. 14.9%, $p=0.014$) domains of the ESSDAI, and lower levels of IgG (12.2 (7.8-35.6) vs. 15.6 (5.7-56.4) g/l; $p=0.012$) and IgA (2.3 (0.9-6.6) vs. 2.9 (0.7-9.4) g/l; $p=0.032$). Whereas there was no difference in EQ5D utility values ($p=0.718$), VAS global health was significantly lower in the patients with SjS who had TE (58 (10-78) vs. 70 (10-97); $p=0.021$). There was no association between the status of TE and autoantibodies (SSA, SSB, RF), lacrimal and salivary glands function (Schirmer's test, unstimulated saliva flow), complement (C3, C4), serum levels of free light chains, β 2-microglobulin, ESSPRI, or total ESSDAI (all p -values >0.1). Of 181 patients, 12.7% (23/283) had appendectomy (AE); 10.5% (12/114) of the SjS patients and 16.4% (11/67) of the sicca patients ($p=0.258$). With the exception of lower unstimulated salivary flow (0.086 (0.01-0.43) vs. 0.11 (0.0-1.3) ml/min; $p=0.026$) in SjS patients with AE, there were no differences in disease phenotype between SjS patients with and without AE (all p -values >0.1).

Conclusion: History of TE in SjS is associated with higher average focus scores and with glandular swelling. It could be speculated that the absence of palatine tonsils is compensated by enhanced lymphocytic infiltrates in the salivary glands. Further research is required to determine if TE is a risk factor for both SjS and non-SjS sicca and to determine the role of the tonsils in the generation of hypergammaglobulinaemia in SjS.

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SAT0216

DISEASE SEVERITY, COMORBID CONDITIONS, TREATMENT PATTERNS, AND FLARES IN ADULTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS IN THE UNITED KINGDOM: A REAL-WORLD OBSERVATIONAL RETROSPECTIVE COHORT ANALYSIS

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Background: There is limited real-world evidence describing the presentation and treatment patterns of systemic lupus erythematosus (SLE) in the United Kingdom (UK).

Objectives: To characterize disease severity, comorbid conditions, treatment patterns, and flares in a longitudinal cohort of adults with SLE in the UK.