SAT0453

ASSOCIATION OF COMORBID PULMONARY CONDITIONS WITH PATIENT-REPORTED OUTCOMES IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Risk of chronic obstructive pulmonary disease (COPD) and allergic conditions, including asthma (AM), is elevated among SLE patients.¹ Both AM and COPD negatively affect quality of life measured through patient-reported outcomes (PROs). Little research has examined the impact of AM and COPD on PROs in SLE, independent of SLE disease status.

Objectives: Determine the impact of AM/COPD on PROs in SLE, concurrently and longitudinally.

Methods: Data from 2 large, longitudinal, observational cohorts were examined (Lupus Outcomes Study, LOS: n=796; National Data Bank for Rheumatic Diseases, Forward: n=2804). AM and COPD were determined at study entry by self-report. PROs included validated scales or items measuring physical functioning, fatigue, pain, cognitive function, depressive symptoms and global severity, although the cohorts included different PROs (Table). Multiple regression analyses examined differences between subjects with and without AM/COPD cross-sectionally, controlling for age, sex, race, lupus duration, education, income, obesity, smoking, other comorbid conditions, and presence or history of renal involvement, clotting disorder or seizures. Longitudinal analyses examined PROs at 3 years (yrs) of follow-up, controlling for covariates above as well as baseline PRO values.

Results: LOS cohort was 92% female, mean age 47 years, 70% white, 42% ever smokers, mean lupus duration 13 years. Forward cohort was 94% female, mean age 51 years, 87% white, 38% ever smokers, mean lupus duration 16 years. 36% of LOS and 30% of Forward reported AM/COPD at study entry, compared to COPD prevalence of 7%² and AM prevalence of 9.7%³ among US women. In cross-sectional analyses (Table), AM/COPD were associated with significantly worse scores on all PRO measures, except depressive symptoms (LOS). Longitudinal results were similar: AM/COPD were associated with worse scores on all PROs except SF-36 PF and Fatigue in LOS.

Table. Multivariate Regression Analyses

	PRO variables	Cross-sectional	Longitudinal
LOS	SF-36 Physical Function (PF) [†]	-9.2 (<0.0001)*	-1.8 (0.26)
	SF-36 Fatigue	6.6 (<0.0001)	2.4 (0.09)
	CESD	1.5 (0.10)	1.7 (0.04)
	MOS Cognitive [†]	-6.6 (<0.0001)	-3.3 (0.01)
Forward	HAQ II	0.2 (<0.0001)	0.2 (<0.0001)
	Fatigue (0-10)	0.7 (<0.0001)	0.8 (<0.0001)
	PHQ8	2.0 (0.01)	1.9 (0.006)
	Pain (0-10)	0.8 (<0.0001)	0.8 (<0.0001)
	Trouble thinking or remembering	1.5 (1.2-1.8)	1.2 (1.0-1.5)
	Global severity (0-10)	0.5 (<0.0001)	0.6 (<0.0001)

*Beta (p value) from multiple linear regression analyses, except Forward 'trouble thinking or remembering', which is odds ratio (95% CI)

[†]Lower scores=worse status. Otherwise, higher scores=worse status

CESD=Centre for Epidemiologic Studies Depression scale; HAQ=Health Assessment Questionnaire; PHQ8=Patient Health Questionnaire depression inventory

Conclusions: AM/COPD are more common in SLE than the general population and are independently associated with worse outcomes on a wide range of PROs, even after controlling for sociodemographic and lupus characteristics. Findings suggest that physicians should screen for pulmonary comorbidities and ensure adequate treatment for these conditions. Future analyses of PROs in SLE should include AM/COPD as important comorbid conditions.

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SAT0454

IN PRIMARY SJÖGREN'S SYNDROME BLOOD CD180-NEGATIVE B CELLS ARE INCREASED IN PATIENTS WITH HIGH SYSTEMIC DISEASE ACTIVITY

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Background: CD180, a related member of the Toll-like receptor family, seems to be underexpressed at the plasma membrane in circulating B cells of auto-immune disease (systemic lupus especially),¹ and is lost in various B-cell lymphomas except marginal zone lymphomas (MZL), the most severe complication of primary Sjögren's Syndrome (pSS).²

Objectives: To define the expression of CD180 at the plasma membrane of circulating B cells of pSS and determine its association with systemic disease activity.

Methods: The expression of CD180 at the plasma membrane of circulating B cells was studied by flow cytometry, in 69 successive patients with pSS, in comparison to patients with systemic lupus (SLE) (n=7) and healthy controls (n=28).

Results: The cohort of pSS was composed of 65 women for 4 men, median age of 59 years.²⁵⁻⁸⁹ Median clinESSDAI was 2 [0-18], 46 patients with a clinESSDAI >0 (low disease activity), 18 patients with a clinESSDAI >5 (moderate disease activity) and 6 patients ≥14 (high disease activity). The more frequently involved domains of the ESSDAI were biological (39%, n=27), glandular (32%, n=22), articular (20%, n=14), and peripheral neurological (9%, n=6) domains. Forty patients were anti-SSA+, 16 anti-SSA and anti-SSB+, 18 had a hypergammaglobulinemia, 17 a hypocomplementemia, 7 a cryoglobulinemia, 18 a rheumatoid factor and 9 a lymphopenia.

- CD180-negative B cells in pSS, SLE and controls

The proportion of total lymphocytes, B cells, T cells, NK cells or CD180-negative B cells (0.85% vs 0.95%, p=0.64) was not significantly different between pSS patients and healthy controls.

Patients with SLE had significantly fewer lymphocytes (860 vs 1544, p=0.0012), B cells and T cells than those with pSS (p=0.023 and p=0.0016); CD180-negative B cells tended have a higher proportion in SLE than in pSS patients (1.9% vs 0.85%, p=0.055).

- Increase of CD180-negative B cells in patients with pSS and high systemic disease activity

CD180-negative B cells subset was significantly higher in patients with high systemic disease activity (2.55% CD180-negative B cells in patients with clinESSDAI ≥14 vs 0.8% in patients with clinESSDAI <14, p=0.036). CD180-negative B cells subset was also significantly higher in patients with anti-SSA and anti-SSB+ (1.9% vs 0.8%, p=0.0082) and in patients with markers of B-cell activation: hypergammaglobulinemia (1.7% vs 0.75%, p=0.034), hypocomplementemia (2.1% vs 0.8%, p=0.0021), cryoglobulinemia (4.6% vs 0.8%, p=0.0097), presence of rheumatoid factor (1.7% vs 0.7%, p=0.015).

Conclusions: Blood CD180-negative B cells are increased in pSS patients with high systemic disease activity or in immunologically active pSS. Fonctionality of CD180 and the prognostic interest of CD180 staining on blood B cells to predict lymphoma in pSS patients, have now to be studied.

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SAT0455

CLINICAL AND IMMUNOLOGICAL CHARACTERISTICS OF PATIENTS WITH SUSPECTED SJÖGREN SYNDROME AND ANTI-RO52 POSITIVE ANTIBODIES

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Background: Anti-Ro52 antibodies have been described in patients with Sjögren syndrome (SS) but there are limited data on their significance, and they are not included in the diagnostic criteria of SS.

Objectives: To analyse the clinical and immunological characteristics of patients with suspected SS and positive anti-Ro52 antibodies, and to assess the diagnostic value of this antibodies.

Methods: retrospective study of all patients evaluated at our Department between January 2000 and January 2016 for possible SS in which anti-Ro52 abs. were determined. Patients were classified as having SS, according to the 2002