EFFECT OF GENDER AND FOLLOW-UP TIME IN DAMAGE ACCRUAL: DATA FROM A LATIN AMERICA LUPUS COHORT.

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Background

Previous studies have shown that male gender is an independent predictor of organ damage in patients with systemic lupus erythematosus (SLE) particularly in the early stages of their disease (1-2). In the previous GLADEL cohort, male patients were found to have a higher SDI (SLICC/ACR Index) than their female counterparts, although this difference was not statistically significant (3).

Objetives

We are now assessing, organ damage as measured by the SDI as a function of gender in the GLADEL 2.0 cohort.

Methods

STUDY POPULATION

→ A total of 44 centers from 10 Latin American countries enrolled patients older than 18 years of age who met the 1982/1997 ACR and/or 2012 SLICC classification criteria.

STATISTICAL ANALYSIS

→ We carried out descriptive analyses. An interaction analysis between gender and time was performed using a mixed R model, being the SDI the dependent variable, while gender (between-subjects) and time (within-subjects) were the independent variables. A random intercept per participant was included to control for within-subject variability.

→ Logistic regression modeling was used to examine the factors associated with the increase in the SDI between the baseline visit and the end of follow-up. A significance level of 5% was used for all analyses and R vs4.4.0 software was used.

REFERENCES
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2. Andrade RM, et al. Arthritis Rheum. 2007;56:622-30.
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Results

Of the 1081 patients enrolled in the GLADEL 2.0 cohort, 385 patients matched by gender were considered; of them, 190 completed at least four annual visits and were included in these analyses; 70% of the patients were women and 30% were men (Table 1).

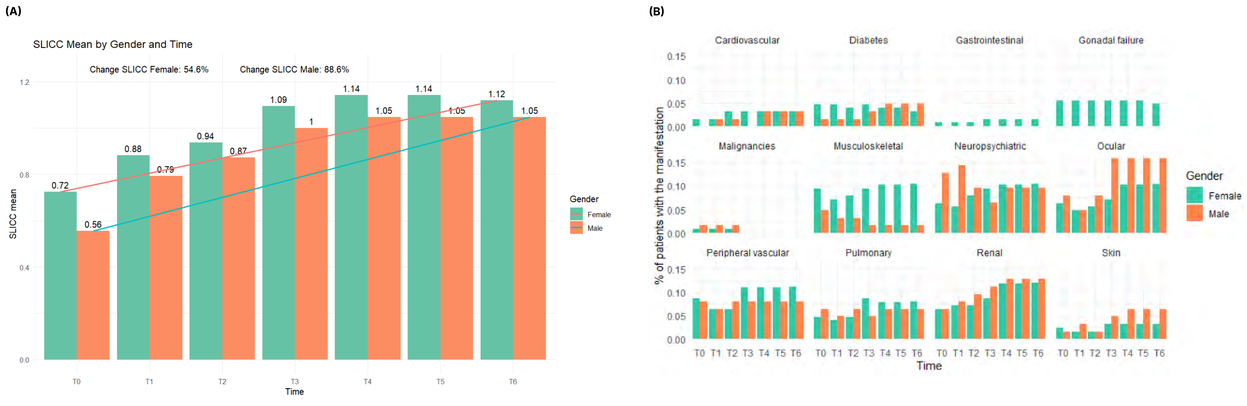
No statistically significant differences in organ damage as measured by the SDI were found between male and female patients (p = 0.563). This trend remained constant throughout the follow-up period, with no significant interactions observed (p = 0.904). However, a higher percentage of male patients had an increase in the SDI at the end of the follow-up period as compared to the female patients (88.6% vs 54.6%) and the accumulation of damage over the follow-up time increased significantly in both sexes. (Figure 1A). The frequency of affected SDI domain was examined both at baseline and during follow-up (Figure 1B). In general, males had a higher occurrence of ocular, cutaneous and malignant involvement than the females whereas they had a higher frequency of gastrointestinal, pulmonary, peripheral vascular and musculoskeletal involvement.

After adjusting for sociodemographic and clinical/immunologic characteristics, multivariate analysis revealed that disease duration (OR: 1.05; 95%CI: 1.0-1.1) and disease activity, as measured by the SLEDAI-2K (OR: 1.05; 95%CI: 1.0-1.1), were associated with a higher likelihood of an increase in SDI.

TABLE 1.
Sociodemographic and clinical characteristics of patients with SLE by gender.

	MALE (n=113)	FEMALE (n=272)	*p*-value	TOTAL (n=385)
Age at diagnosis, Median [Q1, Q3]	27.6 [22.6, 37.6]	26.2 [20.0, 35.1]	0.129	26.5 [20.9, 35.5]
Ethnicity, n (%)			0.204	
Afro-Latin Americans	6 (5.4)	26 (9.6)		32 (8.4)
Indigenous	2 (1.8)	1 (0.4)		3 (0.8)
Mestizos	82 (73.2)	178 (65.7)		260 (67.9)
White	22 (19.6)	65 (24.0)		87 (22.7)
Others	0 (0)	1 (0.4)		1 (0.3)
Socioeconomic status, n (%)			0.287	
High	3 (2.7)	6 (2.3)		9 (2.4)
Low	10 (9.0)	28 (10.7)		38 (10.2)
Middle	49 (44.1)	94 (35.9)		143 (38.3)
Upper middle	21 (18.9)	40 (15.3)		61 (16.4)
Lower middle	28 (25.2)	94 (35.9)		122 (32.7)
Missing	2 (1.8)	10 (3.7)		12 (3.1)
Medical coverage, n (%)			0.154	
Partial coverage	20 (18.0)	33 (12.3)		53 (14.0)
Without coverage	29 (26.1)	93 (34.7)		122 (32.2)
Total coverage	62 (55.9)	142 (53.0)		204 (53.8)
Missing	2 (1.8)	4 (1.5)		6 (1.6)
SLICC_BASAL, Median [Q1, Q3]	0 [0, 1.00]	0 [0, 1.00]	0.56	0 [0, 1.00]
Disease duration, Median [Q1, Q3] in years	2.35 [0.192, 8.92]	2.91 [0.562, 9.82]	0.286	2.70 [0.452, 9.50]
Use of glucocorticoids at baseline, n (%)	64 (97.0)	158 (95.8)	1.000	222 (96.1)
Use of antimalarial at baseline visit, n (%)	64 (97.0)	162 (97.0)	1.000	226 (97.0)
Type of lupus, n (%)			0.838	
1= Patient with SLE, no history of lupus nephritis.	31 (27.4)	82 (30.1)		113 (29.4)
2= Patient with SLE, with prevalent inactive lupus nephritis.	21 (18.6)	55 (20.2)		76 (19.7)
3= Patient with SLE, with active prevalent lupus nephritis.	28 (24.8)	67 (24.6)		95 (24.7)
4= Patient with SLE, with incident (active) lupus nephritis.	33 (29.2)	68 (25.0)		101 (26.2)

FIGURE 1.
(A) Mean SLICC/ACR score and (B) frequency of manifestations by SDI area by gender and follow-up time.



Conclusion

Although male gender was not associated with an increased risk of damage accumulation, the proportion of patients whose SDI increased was higher in them than in their female counterparts. Organ damage during follow-up was significantly increased in both sexes.

As patients in this cohort are followed more closely, the impact of gender on damage accumulation may become more apparent.

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