be the strongest inhibitor of TNF- α among cytokines involved in pSS pathogenesis, iii) results may explain the ineffectiveness of anti-TNF drugs in the treatment of pSS

REFERENCES:

- [1] Fechtner S, et al. Transforming growth factor β activated kinase 1: a potential therapeutic target for rheumatic diseases. *Rheumatology* (Oxford). 2016;56(7):1060-1068.
- [2] Zhou J, et al. Pathogenic role of endogenous TNF- α in the development of Sjögren's-like sialadenitis and secretory dysfunction in non-obese diabetic mice. *Lab Invest*. 2017;97(4):458-467.
- [3] Keystone EC. The utility of tumour necrosis factor blockade in orphan diseases. *Ann Rheum Dis*. 2004;63 Suppl 2(Suppl 2):ii79-ii83.

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THU0272 FUNCTIONAL GASTROINTESTINAL DISORDERS IN WOMEN WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Systemic lupus erythematosus (SLE) is a chronic autoimmune disease with multisystemic involvement. Gastrointestinal (GI) manifestations are frequent in patients with SLE, but functional gastrointestinal disorders (FGIDs), a heterogeneous group of GI diseases have hardly been evaluated in SLE patients.

Objectives: We evaluated the prevalence of FGIDs in SLE patients compared with age-matched controls and the role of potential risk factors for FGIDs.

Methods: SLE patients who met the ACR classification criteria for SLE and age-matched controls completed the Rome III questionnaire to assess the prevalence of FGIDs. Exclusion criteria were organic gastrointestinal disorders. Patients completed a structured interview to assess sociodemographic, clinical and treatment variables. Logistic multivariate analysis was performed to determine potential clinical factors (alcohol ingestion and medications) for FGIDs.

Results: The study responders included 116 SLE patients and 122 controls. The prevalence of FGIDs was higher in SLE patients than in controls (74.1% vs. 54.1%; $p = 0.01$). The most frequent FGIDs were nausea and vomiting disorders, belching disorders and globus pharyngeus. Anorectal disorders, mainly anorectal pain, were more frequent in SLE patients than controls (14.7% vs. 5.7%). After adjusting for confounding variables, SLE was associated with globus pharyngeus (OR: 3.5, 95%CI: 1.3-9.3), functional heartburn (OR: 2.5, 95% CI: 1.5-4.4), nausea and vomiting disorders (OR 7.1, 95% CI 2.7-19.1) and anorectal disorders (OR: 3.4, 95% CI 1.4-8.4). Overlap symptoms were present in 69.8% of patients vs. 31.8% of controls. When only SLE patients were evaluated, glucocorticoid therapy and non-steroidal anti-inflammatory drugs (NSAIDs) were associated with any FGID and functional bowel disorders, while alcohol ingestion was associated with gallbladder and sphincter of Oddi disorders.

Conclusion: There is a higher prevalence of FGIDs in patients with SLE and a wider distribution of various GI tract symptoms compared with controls. Medication that may alter gastrointestinal homeostasis, such as NSAIDs and protein pump inhibitors, were associated with FGIDs in SLE patients.

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THU0273 EVALUATION OF RELAPSE RATE AND LIFE PROGNOSIS AFTER INDUCTION THERAPY IN PROLIFERATIVE AND MEMBRANOUS LUPUS NEPHRITIS

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Background: The most common cause of morbidity and mortality in systemic lupus erythematosus (SLE) is lupus nephritis (LN). Renal flares are disadvantageous to the renal function of patients with severe LN, and the flares contribute to morbidity in patients with SLE. The reported incidence of renal flares has varied with the populations studied, the distribution of histological classes of LN, the treatment administered and the definitions of renal flare.

Objectives: Here we evaluated the relapse rate and life prognosis after induction therapy in proliferative and membranous LN.

Methods: We retrospectively analyzed the cases of 151 patients who underwent renal biopsy at our hospital and community hospitals from 1993 to 2016. We determined the complete response (CR) rate at 6 and 12 months after induction therapy and evaluated the predictive factors for CR, relapse rate, and life prognosis in proliferative and membranous LN.

Results: We were able to examine the therapeutic response, relapse rate and life prognosis at 6 and 12 months after therapy was introduced in 140 cases. Most of the patients were female (84.3%). The median age at LN onset was 34.0 years (interquartile range [IQR] 25.3-45.0 years), and the disease duration of SLE was 42 months (IQR 2.0-121.0 months). The median follow-up duration after renal biopsy was 96 months (IQR 44.0-168.0 months). The renal pathology of 99 (70.7%) patients was classified as ISN/RPS Class III or IV, and 41 (29.3%) patients were ISN/RPS Class V. Thirty-five patients (35.4%) were Class III or IV, and 17 patients (41.5%) in Class V achieved a CR at 6 months. Fifty patients (50.5%) in Class III/IV and 22 patients (53.7%) in Class V achieved a CR at 12 months. A multivariate analysis showed that a lower index of chronicity as assessed by the NIH histological scoring system in Class III/IV, and neutrophil infiltration and CH50 in Class V were predictive factors for achieving a CR at 12 months. A Kaplan-Meier analysis showed that the relapse rate and life prognosis were not different between proliferative and membranous LN.

Conclusion: Our results suggest that the predictive factors for a CR at 12 months after induction therapy are a lower index of chronicity in class III/IV and neutrophil infiltration and CH50 in Class V. In general, proliferative LN is more immunologically active than membranous LN, but we observed no significant differences in the achievement of a CR at 6 or 12 months after induction therapy, the relapse-free period, of life prognosis between proliferative and membranous LN. The therapeutic response and life prognosis of membranous LN as well as proliferative LN should be monitored closely.

REFERENCES:

- [1] Ichinose K, et al. Factors predictive of long-term mortality in lupus nephritis: A multicenter retrospective study of a Japanese cohort. *Lupus*. 2019 *in press*
- [2] Ichinose K, Okamoto M, et al. Complete renal response at 12 months after induction therapy is associated with the renal relapse-free rate in lupus nephritis: a single center retrospective cohort study. *Lupus*. 2019 *in press*

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THU0274

QUALITATIVE AND QUANTITATIVE ANALYSIS OF THE IMMUNOLOGIC CHARACTERISTICS OF THE MINOR SALIVARY GLAND BIOPSY IN SJÖGREN'S SYNDROME

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Background: Minor salivary gland biopsy (MSGB) is the most important diagnostic test of Sjögren's Syndrome (SS). It demonstrates the presence of the inflammatory infiltration in the most affected site. It's possible role as a biomarker in the disease is still unknown. The Immunology Department of our center conducts a detailed analysis of the MSGB about the leukocyte infiltration and quantifies number of each cell.

Objectives: To describe the immunologic features of the MSGB and carry out an association analysis with clinical variables

Methods: Clinical variables, ESSDAI index at the moment of diagnosis and laboratory parameters were recorded. As from the MSGB, number of infiltration focus (1, 2 or several), big infiltrations (>100 cells), number of B and T cells, CD4/CD8 ratio and presence of isolated lymphocyte were collected. Categorical variables were described as frequencies and analysed using Fisher exact test. T student and Wilcoxon Rank Sum Test were used for comparison of means (μ).

Results: In 2017, a total of 104 MSGB were carried out in our center. Among them 58 were diagnosed as SS by medical and ACR/EULAR 2016 criteria. Finally 41 patients with SS and abnormal MSGB result were included for this study.

Basal characteristics of patients	Frequency (number/percentage)
Men	8/19,5%
Extraglandular disease	18/43,9%
ESSDAI $\geq$ 2	17/41,46%
Other autoimmune diseases	2/4,87%
Ac. Ro/La	0/0
CRP	13/31,71% (μ 9,79mg/dL)
ANA pattern	8/19,51%
Negative	1/2,44%
Homogenous	16/39,02%
Speckled	10/24,39%
Speckled and Homogeneous	6/14,64%
Other	

Biopsy: Patients with active disease (ESSDAI $\geq$ 2) had greater amount of cells (μ 159 cells vs 509 cells; $p=0,055$) as well as those with extraglandular disease (μ 160 vs 488; $p=0,08$). Patients with active disease also had larger number of infiltration focus ($p=0,062$). The presence of isolated CD8+ T cells was observed in 13 patients and they had lesser cells (μ 136 vs 381; $p=0,35$). In those samples with predominance of T cells over B cells had larger number of infiltrate focus (7/20; 35% vs 12/21; 57.14%; $p=0,155$). No association with disease activity or extraglandular manifestation was found.

Extraglandular manifestation and disease activity: 18 patients had extraglandular disease. Moderate or severe ESSDAI activity was found in 14 of these patients (34.2%, $p=0,00$). The biopsy of patients with extraglandular disease had larger amount of cells (μ 200 vs 145; $p=0,01$). Patients with active disease had more infiltrate focus (6/22 vs 11/19; $p=0,047$). Disease evolution time was similar with a mean duration of 8-9 years in both groups.

Corticosteroids: There were 3 patients with active steroid treatment ($\geq$ prednisone 10mg/d) at the moment of the biopsy. All 3 of them had >1 focus in the sample and 2 of them had large infiltrate with >150 cells. Eight of them had received steroids in the last 5 years, 6 of them had large infiltrate with >150 cells and 4 had >1 infiltrate focus in the biopsy. A study with more sample should be carried out to study the influence of steroids in the biopsy results.

Conclusion:

- Patients with extraglandular disease have larger amount of cells in the composition of infiltration. Those with more disease activity had more number of infiltration focus.

- In 14 patients specific antibodies and antinuclear antibodies were negative. In these patients the biopsy is the most useful diagnostic test.
- Possible association of those variables that were statistically not significant should not be ruled out due to the small sample size of the study.

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THU0275

NEW PROSPECTIVE OF COGNITIVE IMPAIRMENT IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS: A PRAGMATIC LANGUAGE EVALUATION

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Background: Cognitive impairment (CI) in Systemic Lupus Erythematosus (SLE) is a frequent neuropsychiatric manifestation affecting several domains, even in apparently asymptomatic patients. Current research revealed that the typical CI pattern affects frontal-subcortical circuit and thus executive functions. The impairment of non-literal language or Pragmatic Language (PL), including metaphors, idioms, inferences or irony has been well described in several conditions such as autism disorders, Parkinson's disease, brain injury and even in earlier phases of neurodegenerative processes. Even if PL neuro-anatomy remains controversial, correlation between executive dysfunctions and non-literal language involvement has been reported both in traumatic injury and mild cognitive impairment patients. Nonetheless, no specific study has been performed to evaluate PL impairment in SLE patients so far.

Objectives: We aimed at assessing the PL domain in a monocentric SLE cohort in comparison to healthy controls, matched to age and education, through a specific battery, BLED [1]. Secondly, we focused attention on possible correlations between CI and clinical and laboratory SLE-related features.

Methods: Forty adult patients affected by SLE, according to the ACR criteria, and thirty healthy subjects were enrolled consecutively in this cross-sectional study. The protocol included complete physical examination, extensive clinical and laboratory data collection (comprehensive of demographics, past medical history, co-morbidities, disease activity, chronic damage evaluation, previous and concomitant treatments) and cognitive assessment for five different domains: memory, attention, pragmatic language, executive and visuospatial functions. Self-reported scale for anxiety and depression were performed to exclude the influence of mood disorders on cognitive dysfunction.

Results: We enrolled forty Caucasian SLE patients (M/F 3/37; mean $\pm$ SD age 45.9 $\pm$ 10.1 years, mean $\pm$ SD disease duration 120.8 $\pm$ 81.2 months) and thirty healthy subjects (M/F 9/21; mean $\pm$ SD age 41.3 $\pm$ 13 years). According to the low level of disease activity and damage (mean $\pm$ SD SLEDAI-2K of 1.3 $\pm$ 2.3, mean $\pm$ SD SDI of 0.2 $\pm$ 0.5), only 30% of patients was on glucocorticoid treatment at the study entry. PL was the most compromised domain in terms of Mean Domain Z scores (Fig. 1). As regards the Domain Cognitive Dysfunction score, a deficit of PL was observed in 45% of patients and resulted significantly more prevalent than memory, executive and visuospatial functions impairment ($P=0,0002$, $P=0,0002$ and $P<0,000001$, respectively). According to Global Cognitive Dysfunction score 25% of patients experienced a mild impairment and 7.5% a moderate one. Anti-phospholipid antibodies positivity was significantly associated with memory impairment ($P<0,0005$), whereas the presence of other neuropsychiatric events was associated with executive dysfunctions ($P<0,05$); neither further significant association nor correlation were identified.