References:

- [1] Martyna TS, Hanna SS, Marek F. Clinical and immunological characteristics of Polish patients with systemic lupus erythematosus. *Adv Clin Exp Med*. 2018;27(1):57–61
- [2] Maloney K C, Ferguson T S, Stewart H D, et al. Clinical and immunological characteristics of 150 systemic lupus erythematosus patients in Jamaica: A comparative analysis[J]. *Lupus*, 2017, 26(13):961203317707828.
- [3] Ching K H, Burbelo P D, Christopher T, et al. Two Major Autoantibody Clusters in Systemic Lupus Erythematosus[J]. *PLoS ONE*, 2012, 7(2):e32001.

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AB0447

IRREVERSIBLE ORGAN DAMAGE IN PERI- AND POSTMENOPAUSAL WOMEN WITH SYSTEMIC LUPUS ERYTHEMATOSUS IN REMISSION

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Background: Although the survival of patients with systemic lupus erythematosus (SLE) has improved, irreversible organ damage remains a critical concern. Long-standing inflammation, drug-related side effects and comorbidities may eventually cause permanent organ damage even in remission [1].

Objectives: To describe irreversible organ damage in peri- and postmenopausal women with SLE in remission and low disease activity, to find predictors of damage progression.

Methods: 234 peri- and postmenopausal women with SLE were included (mean age 49,94±9,1 years) in our study. All women were under outpatient observation in St.Petersburg State Clinical Rheumatology Hospital #25 (Russia). Mean disease duration was 8,9±7,5 years. We analyzed treatment regimens and doses of glucocorticoids (GC) based on source medical documents. To assess disease activity, we used SLEDAI-2K and LLDAS. To assess organ damage, we used SLICC damage index (SDI).

Results: 94,3% of women have been taking GC during our study. Median of maintenance dose was 12,5mg per day. Almost a half of all women (44,8%, n=105) in our study were postmenopausal (mean duration of menopause was 11,1±7,1 years). A half of all patients had low disease activity (44,4%, n=111) or were in remission (18,8%, n=44) according to SLEDAI-2K. 26,5% (n=65) of patients had all 5 criteria and 45,1 % (n=115) of patients had 4 of 5 criteria according to LLDAS. Critical organ damage (SDI>4) was observed in 68,8% (n=161) of women with SLE. Moderate (1≤SDI≤4) and low (SDI=1) damage had 25,6% (n=60) and 6,4% (n=15) of patients respectively. Musculoskeletal damage was on the first place among others: 37,6% (n=88) of patients had osteoporosis with fractures and 34,2% (n=80) had muscle weakness. In 75 women with SLE of osteoporotic fractures occurred in remission or low disease activity (LLDAS). Progression of irreversible organ damage in remission or low disease activity (LLDAS) had 62% (n=145) of women with SLE. Multifactorial logistic regression analysis of factors associated with organ damage in SLE showed that only patients age (p=0.013215), cumulative dose of GC (p=0.000047) and therapy with cyclophosphamide (p=0.041505) were statistically significant.

Conclusion: Progression of irreversible organ damage in peri- and postmenopausal women with SLE may occur despite remission or low disease activity. There are no doubts that organ damage accrual is associated with CG therapy. Correction of GC dose or discontinuation of GC treatment in remission can predict organ damage accrual in SLE including osteoporosis and osteoporotic fractures.

References:

- [1] Frodlund M, Reid S, Wetterö J, Dahlström Ö, Sjöwall C, Leonard D. The majority of Swedish systemic lupus erythematosus patients are still affected by irreversible organ impairment: factors related to damage accrual in two regional cohorts. *Lupus*. 2019;28(10):1261–1272. doi:10.1177/0961203319860198

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AB0448

IMPACT OF REMISSION ON DAMAGE ACCRUAL IN SYSTEMIC LUPUS ERYTHEMATOSUS (SLE) PATIENTS: A SYSTEMATIC LITERATURE REVIEW (SLR)

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Authors	Country/Region	Patients	Remission	Achieving remission (%)	Damage: remission vs not remission	NOS
Zen et al	Italy	224	SLEDAI=0 Serologic= allowed PGA= NR PDN ≤ 5 IS=Yes AM=Yes	37.5%	Unremitted disease OR=2.53; p=0.008	7
Tani et al	Italy	115	Duration=5 years SLEDAI=0 Serologic PGA= NR PDN ≤ 5 IS=Yes AM=Yes	49.6%	ΔSLICC 0.12 vs 0.48, p= 0.018	8
Ugarte-Gil et al	Latin America	1,350	Duration=NR SLEDAI=0 Serologic= not allowed PGA= NR PDN ≤ 5 IS=Yes AM=Yes	20.2%	New damage HR 0.60 p=0.0042 Severe new damage HR 0.32 p=0.0033	8
Tsang-A-Sjoe et al	Netherlands	224	Duration=NR SLEDAI=0 Serologic= allowed PGA= NR PDN ≤ 5 IS=Yes AM=Yes	37.6%	OR=0.20; p=0.001	8
Mok et al	China	769	Duration>5 years SLEDAI=0 Serologic= Allowed PGA<0.5 PDN ≤ 5 IS=Yes AM=Yes	25.1%	Not being on remission for at least 5 years OR: 2.42; p<0.001	7
Tselios et al	Canada	267	Duration≥5years SLEDAI=0 Serologic= Allowed PGA=NR PDN no restriction IS no restriction AM=Yes	10.1%	SDI after 10 years: 0.96 vs 1.53 (not on remission, not on LDAS), p for trend =0.029	7
Petri et al	US	1,356	Duration≥5years SLEDAI=0 Serologic= NR PGA<0.5 PDN ≤ 5 IS=Yes AM=Yes Duration= NR	NR	Rate ratio per percentage of follow-up RR(<25%)=0.54; p<0.0001 RR(25-49%)=0.47; p<0.0001 RR(50-74%)=0.43; p<0.0001 RR(>75%)=0.45; p=0.0019	7
Golder et al	Asia Pacific	1,707	SLEDAI=0 Serologic=Yes PGA<0.5 PDN ≤ 5 IS=Yes AM=Yes Duration= NR	35.8%	HR=0.55; p<0.0001	6

NR: Not recorded. OR: Odds Ratio. HR: Hazard ratio. RR: Rate ratio

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Background: Treat-to-target strategy with remission as the target has been proposed for the management of SLE. However, there is not a uniform definition of remission.

Objectives: To determine the protective value of remission state on organ damage accrual in SLE patients through a SLR.

Methods: Two independent reviewers identified studies in Medline and Cochrane Library. Data on remission definitions and rates as well as damage accrual (assessed by the SLICC/ACR damage index [SDI]) were extracted. Definitions of

remission included disease activity indices (SLEDAI and its variants and PGA), serological activity, prednisone (PDN) daily dose (mg/day), immunosuppressive (IS) drugs, antimalarial (AM) use and duration of remission. The quality of the studies was evaluated with the Newcastle-Ottawa Scale (NOS).

Results: Eight manuscripts were included comprising more than 6,000 patients from America, Europe and Asia Pacific. All the studies were longitudinal. The majority of the studies reached more than seven out nine points in the NOS. Remission rates ranged between 10 and almost 50%; they tend to be lower in America as compared to Asia Pacific and Europe. All definitions required a clinical SLEDAI=0, and allowed antimalarial use. However, there were differences regarding the inclusion of serological activity, PGA, prednisone or immunosuppressive drug use as well as minimum remission duration required. Even less stringent definition of remission prevented damage accrual. The risk of damage accrual was two to five-fold lower in those patients on remission.

Conclusion: In SLE patients, achieving remission, even with less stringent definitions, prevented damage accrual.

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AB0449

IMPACT OF REMISSION AND LOW DISEASE ACTIVITY (LDA) ON HEALTH-RELATED QUALITY OF LIFE (HRQOL) IN SYSTEMIC LUPUS ERYTHEMATOSUS (SLE) PATIENTS: A SYSTEMATIC LITERATURE REVIEW (SLR)

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Background: Treat-to-target strategy has been proposed in SLE. Achieving remission/LDA should prevent damage, reduce mortality and improve HRQoL.

Objectives: To determine the protective value of remission or LDA states on HRQoL in SLE using a SLR.

Methods: Two independent reviewers identified studies in Medline and Cochrane library and extracted data on remission, LDA and HRQoL. Remission and LDA definitions included disease activity (SLEDAI and its variants, SLAM and PGA), serological activity, new organ/system, prednisone (PDN) dose (mg/day), immunosuppressives (IS) drugs, antimalarial (AM) use and remission duration. The quality of the studies was assessed with the Newcastle-Ottawa Scale (NOS).

Results: Three manuscripts (1059 patients) for remission and 4 (2385 patients) for LDA were included (America, Europe & Asia Pacific). All the studies reached seven out of nine NOS points. Remission rates ranged 25-39%; and LDA: 42-62%. Even less stringent remission or LDA definitions predicted/were associated with a better HRQoL. Physical rather than mental domains were more associated with remission or LDA.

Conclusion: In SLE patients, achieving remission or LDA, is associated with a better HRQoL.

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Table 2. Association between LDA and HRQoL

Authors	Country/Region	Patients	LDA	LDA (%)	Domains positively associated or predicted by LDAS
Golder et al*	Asia Pacific	1422	SLEDAI≤ 4 PGA≤ 1 PDN ≤ 7.5 IS=Yes AM=Yes New manifestations: No	42.0	SF-36: Role physical, bodily pain, general health, vitality, social functioning, role emotional, mental health, PCS and MCS
Ugarte-Gil et al#	USA	483	Duration=NR SLAM≤ 3 PGA=NR PDN ≤ 7.5 IS=No AM=Yes New manifestations: NR	NR	SF-36: Physical function, role physical, bodily pain, general health, vitality, social functioning, role emotional, mental health, PCS and MCS
Ugarte-Gil et al#	Peru	243	Duration=NR SLEDAI≤ 4 PGA=NR PDN ≤ 7.5 IS=Yes AM=Yes New manifestations: NR	48.6 at baseline	LupusQoL Physical health, pain, planning, burden to others, emotional health, fatigue
Poomsalood et al*	Thailand	237	Duration=NR SLEDAI≤ 2 Serologic= allowed PGA=NR PDN ≤ 7.5 IS=Yes AM=Yes New manifestations: NR	61.6	SLEQoL Univariable: physical, activities, symptom, treatment, mood, self-image and total. Multivariable: Better global QoL

PCS: Physical component summary. MCS: Mental component summary. *Cross-sectional #Longitudinal

Table 1. Association between remission and HRQoL

Authors	Country/Region	Patients	Remission	Remission (%)	Domains positively associated or predicted by remission
Mok et al*	China	769	SLEDAI=0 Serologic= Allowed PGA<0.5 PDN ≤ 5 IS=Yes AM=Yes Duration≥5years	25.1	Remission>5 years vs not on remission SF-36: Role physical, bodily pain, general health, vitality, social functioning, role emotional, PCS and MCS LupusPRO: Symptoms, medications, procreation, physical health, pain, emotional, image, HRQoL total
Tsang-A-Sjoe et al#	Netherlands	154	SLEDAI=0 Serologic= allowed PGA ≤2/10 PDN ≤ 5 IS=Yes AM=Yes Duration=NR	39.0 at baseline	Remission on- or off-therapy predicted a better SF-36 PCS but not MCS
Margiotta et al*	Italy	136	SLEDAI=0 Serologic= allowed PGA= NR PDN ≤ 5 IS=Yes AM=Yes Duration>5 years	39.0	Remission >5years vs unremitted or remission<5 years SF-36: Physical health, role physical, bodily pain, general health, social functioning

PCS: Physical component summary. MCS: Mental component summary. *Cross-sectional #Longitudinal

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