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AB0289

PATIENT REPORTED PHYSICAL HEALTH COMPARED TO CLINICIAN RECORDED BILAG-2004 MUSCULOSKELETAL SYSTEM SCORES – DISCORDANCE BETWEEN PATIENTS AND CLINICIANS

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Background: The musculoskeletal organ system BILAG-2004 (MSK BILAG) assessment is of critical importance in SLE clinical trials. Severe active polyarthritis, MSK BILAG A, by definition includes significant impairment of basic activities of daily living (ADLs), as opposed to MSK BILAG C, D, or E where ability to perform ADLs is expected to be preserved. In clinical trials, BILAG is scored by clinicians without formal review of patient reported outcomes (PROs). The Physical Health domain of the LupusQoL (LQoL PH) (range 0 – 100) can be used to assess the patient's physical function and ADLs. LQoL PH score thresholds defining impairment severity have not been established; however, a transformed LQoL PH score ≤ 50 suggests more impaired function, which would not be expected in MSK BILAG C, D, or E. Conversely, a score >50 implies no major issues with ADLs, which would be contradictory to the definition of MSK BILAG A.

Objectives: To assess correlation of patient reported LQoL PH with MSK BILAG scores recorded by clinicians at various timepoints using data from the phase 3 TULIP studies^{1,2} and to investigate the percent of discordance between patients and clinicians.

Methods: Data from TULIP 1 and 2 studies (anifrolumab 300mg and placebo arms) were pooled to evaluate the relationship between LQoL PH and MSK BILAG scores at baseline, weeks 24 and 52 using Spearman correlations as post-hoc analysis. Mean LQoL PH scores were assessed for each MSK BILAG category at the three timepoints using one-way ANOVA. Percent of patients with MSK BILAG A and LQoL PH scores >50 and patients with MSK BILAG C, D, or E and LQoL PH scores ≤ 50 was calculated at baseline, week 24 and 52. MSK BILAG B was excluded from the analysis because discordance could not be easily defined for this category compared with the more extreme MSK BILAG categories.

Results: Total of 690 patients were included in the pooled analysis (Table 1). Significant correlations between LQoL PH and MSK BILAG scores were found at each time point (nominal $p < 0.0001$); this relationship became stronger over time. Mean LQoL PH scores were different in each MSK BILAG category, with the highest in MSK BILAG D/E and the lowest in the MSK BILAG A category, thus confirming the discriminatory ability of the LQoL PH (Table 1).

Table 1. Correlation coefficients (CC) between LQoL PH and MSK BILAG scores, and mean LQoL PH scores with standard deviations (SD) per each MSK BILAG category at baseline, weeks 24 and 52.

	Baseline		Week 24		Week 52	
	CC	N	CC	N	CC	N
Total Population	-0.25	690	-0.36	626	-0.41	552
MSK BILAG	Mean LQoL PH Score (SD)		Mean LQoL PH Score (SD)		Mean LQoL PH Score (SD)	
0 (D/E)	69.3 (24.7)	17	74.2 (22.1)	186	74.5 (21.3)	237
1 (C)	62.3 (25.4)	60	64.0 (23.9)	233	60.6 (22.5)	184
8 (B)	56.6 (24.4)	398	55.1 (24.2)	163	51.3 (24.3)	105
12 (A)	44.9 (25.8)	215	43.9 (25.9)	44	44.2 (26.2)	26

At baseline, 40% of patients who were assessed by clinicians as having MSK BILAG A reported minimal impairment in physical function and ADLs (LQoL PH >50) and 24.1% who had MSK BILAG C, D, or E reported difficulties with ADLs

(LQoL PH ≤ 50), suggesting discordance between patients and clinicians. This discordance slightly decreased over time (Figure 1).

Figure 1. Percent of patients with MSK BILAG A and LQoL PH scores >50 and patients with MSK BILAG C, D, or E and LQoL PH scores ≤ 50 at baseline, weeks 24 and 52.

Conclusion: Patient reported LQoL PH scores correlated with MSK BILAG scores and showed discriminant validity for MSK BILAG scores. Greater discordance was seen between LQoL PH and MSK BILAG A compared with C, D, or E. These findings suggest a need for further investigation of a role for PROs in MSK BILAG scoring. Formal review of PROs by clinicians during MSK BILAG assessment could be considered in future SLE clinical trials.

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AB0290

TREATMENT OF INTERSTITIAL LUNG INVOLVEMENT IN SYSTEMIC LUPUS ERYTHEMATOSUS: EXPERIENCE IN A THIRD LEVEL HOSPITAL

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Background: There are few studies¹ on the treatment of diffuse interstitial lung disease (ILD) associated with systemic lupus erythematosus (SLE). Corticosteroids are usually used in cases of mild to moderate decrease in diffusion and the association with immunosuppressants (Cyclophosphamide, Rituximab...) is reserved for cases of more severe affection.

Objectives: Assess the main treatments used in ILD associated with SLE in a third level hospital and analyze the therapeutic response through improvement in imaging tests and in respiratory function studies.

Methods: Descriptive observational study of patients diagnosed with SLE (SLICC criteria) who developed ILD in our hospital between 1973 and 2020. As variables of response to treatment, HRCT pattern at diagnosis and at two years, respiratory function tests at diagnosis and at one year were analyzed. Likewise, the different treatments used before and after diagnosis were studied such as hydroxychloroquine (HCQ), prednisone, methotrexate (MTX), Rituximab (RTX), belimumab (BLM), Cyclophosphamide (CFM), azathioprine (AZA) and mycophenolate mofetil (MMF).

Results: A total of 455 patients diagnosed with SLE were included, of which 20 had ILD (4.4%). 65% of the analyzed sample were women with a mean age at diagnosis of 63 ± 16.23 years. 30% presented ILD as the first clinical data for the diagnosis of SLE. Only 3 patients died (due to causes other than ILD and SLE). At diagnosis, 90% had symptoms such as dyspnea (75%) and cough (60%).

85% had alterations in the X-ray and 100% in the HRCT, where the predominant pattern was NINE (65%). Spirometry showed an obstructive (25%), restrictive (20%) and normal (55%) pattern; 90% had decreased diffusion, the majority being mild (67%). With the treatment administered, HRCT stability was observed

at two years in 30% of cases and progression in 25%; while, at the functional level, 40% remained stable with worsening in 4 patients per year (20%). 50% of the patients with SLE received treatment with HCQ and MTX before the diagnosis of ILD; and 35% corticosteroids (4 + 7.3 mg / day). With ILD diagnosed, HCQ was administered to 95% of patients and the standard of treatment was based on corticosteroids in monotherapy at a mean dose of 13 ± 10.5 mg / day due to stability both at radiological level and in function tests respiratory. 25% and 15% required treatments such as RTX and BLM as they did not have an adequate response with the previous one.

In our study, we did not find any statistical significance between the variables analyzed, due to the small sample size.

Conclusion: 1)ILD in SLE is a rare manifestation, present in 4.4% of our series. Standard treatment with hydroxychloroquine and corticosteroids appears to be a useful therapeutic option, stabilizing radiological progression in one third of cases early. More studies with a larger sample size are needed to analyze the role of immunosuppressive treatment in this type of lung involvement.

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AB0291

PROGNOSTIC VALUE OF LATE GADOLINIUM ENHANCEMENT ON CARDIAC MAGNETIC RESONANCE IMAGING IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Cardiac Magnetic Resonance Imaging (CMRI) with Late Gadolinium Enhancement (LGE) has an established value in the diagnostic and prognostic assessment of ischaemic and non-ischaemic cardiomyopathies. Although CMRI is widely used for the detection of myocardial involvement in subclinical Systemic Lupus Erythematosus (SLE), its prognostic value has not been determined.

Objectives: To determine the prognostic value of CMRI with LGE for major adverse cardiovascular events (MACE) in patients with SLE, and investigate its correlation with the severity of systemic inflammation.

Methods: A retrospective tertiary single-centre review of patients with SLE who underwent a CMRI study at Manchester Foundation Trust between 2009-2020 was conducted. Patients were categorized into two groups; those who experienced a MACE (cardiac death, myocardial infarction (MI), stroke/TIA or heart failure) and those who did not. We compared cardiovascular (CV) risk factors, CMRI findings, SLE risk scores and biochemistry between the 2 groups.

Results: We identified 20 female patients who underwent a CMRI, with a mean age of 46 years at the time of the scan. Indications for CMRI were assessment for worsening dyspnoea and new onset left ventricular systolic dysfunction. Table 1 demonstrates the clinical, laboratory and CMRI characteristics of the two groups. There were no significant differences in the clinical background and traditional CV risk factors between the 2 groups. 5/20 (25%) patients experienced a MACE. The SLEDAI-2K score was >12 in 2/5 (40%) of patients who suffered a MACE and they presented with a stroke within a year of CMRI study, suggesting that systemic inflammation contributes to poor vascular outcomes. 3/5 (60%) patients who reported a MACE demonstrated LGE on their CMRI study compared to 3/15 (20%) of those who did not ($p=0.045$). The LGE was predominantly diffuse, mid myocardial in distribution and not ischaemic in pattern, signifying a complex pathophysiological substrate in the development of myocardial pathology in SLE. Additionally, an increase in left ventricular end-diastolic, end-systolic volumes and left atrial diameter was noted in patients who had a MACE ($p<0.05$). Patients who had a MACE showed a higher incidence of valvular abnormalities and pericardial disease in their CMRI studies. On looking at the medications around the CMRI, the majority of MACE positive patients 4/5 (80%) were on conventional Disease Modifying Anti-Rheumatic Drugs (DMARDs) such as Mycophenolate, Tacrolimus, Cyclophosphamide, Methotrexate or hydroxychloroquine and none on biologics like Rituximab or Belimumab. While 9/15 of the MACE negative patients were on DMARDs and 4/15 were on biologics.

Table 1. clinical, laboratory and CMRI characteristics of SLE patients with and without MACE. LVEDV-left ventricular end-diastolic volume, LVESV-left ventricular end-systolic volume, LA-left atrial, LVEF-Left ventricular ejection fraction, SLEDAI- SLE Disease Activity Index, +ve-positive.

	MACE+ (n = 5)	MACE- (n = 15)
Mean age of SLE diagnosis (years)	35.6	34.4
Mean duration to CMRI (years)	8.8	11.71
Lupus nephritis	20%	20%
Raynaud's	40%	27%
Previous CV involvement	0	2
SLEDAI-2K > 12	2(40%)	11(73%)
Lupus anticoagulant +ve	20%	27%
Anticardiolipin +ve	2(40%)	2(14%)
anti-dsDNA (iu/ml)+ve	3(60%)	6(40%)
Low C3 (g/L)	2(40%)	6(40%)
Mean prednisolone dose	28.33	8.21
Conventional DMARDs	4/5(80%)	9/15(60%)
Biologics	0/5	4/15
Mean LVEF (%)	47.4	56.7
CMR LGE	3(60%)	3(20%)
Valvular abnormalities	2(40%)	4(27%)
Mean LA area (cm ²)	29.6	20.6
Pericardial effusion	40%	27%

Conclusion: In our small SLE cohort, we add to existing knowledge that CMRI with LGE is an indispensable tool to investigate cardiac involvement in SLE and may indeed add important prognostic information. Larger scaled studies are required to confirm the use of CMRI with LGE as a predictor of MACE in patients with SLE.

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AB0292

A RETROSPECTIVE STUDY OF PERIOPERATIVE MANAGEMENT OF PATIENTS WITH SLE IN TOTAL HIP ARTHROPLASTY

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Background: Aseptic necrosis (AN) of bones is one of the most serious complications of systemic lupus erythematosus (SLE), which is characterized by multicomponent joint damage mainly in young people. Long-term observations show that two thirds of patients have multiple aseptic necrosis of bones, with the femoral head being most often affected. Obviously, caused by much strain on the hip joint. In this regard, total hip arthroplasty (THA) is an integral part of the treatment of SLE patients. Despite the fact that THA in these patients allows to achieve good functional outcomes, the amount of complications remains high.

Objectives: To retrospectively analyze the outcomes and structure of complications to determine the tactics of perioperative management of patients with SLE.

Methods: The retrospective group included patients over 18 years of age with a reliable diagnosis of SLE, established according to the classification criteria (SLICC, 2012, ACR, 1997). 123 THA were performed in 77 patients. Outcomes and the structure of complications were analyzed for the period from 1998 to 2016 inclusive.

Results: The period of hospital stay of patients was analyzed. Cementless fixation of the components of the endoprosthesis was used and the friction pair was metal-polyethylenel in all cases. In 23 patients, additional fixation of the acetabular component with screws was performed, which indirectly indicates a poor quality of bone tissue. A more detailed analysis of these patients revealed a long period of glucocorticoid therapy (from 1.5 to 35 years). In 3 patients, during preparation for implantation of the femoral component, a femoral fracture occurred, which required using the cerclages. One patient also had a fracture of the acetabulum, which required the implantation of a Müller anti-protrusion ring. The above-described technical features led to increasing of the total time of surgery, which significantly increased the volume of blood loss. Thus, this required transfusions of blood components: fresh frozen plasma (FFP), erythrocyte suspension, as well as replenishment the circulating blood volume with colloidal solutions.

Prevention of thromboembolism. All patients in the postoperative period underwent common measures of prevention of venous thromboembolism.