P148 COMPARISON OF CYCLOPHOSPHAMIDE AND RITUXIMAB IN THE TREATMENT OF SEVERE SYSTEMIC LUPUS ERYTHEMATOSUS

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Objective Severe flare of systemic lupus erythematosus (SLE) often requires aggressive immunosuppressive treatment. The success of the induction treatment is crucial in preventing organ damage. Our aim was to compare the efficacy and safety of iv. cyclophosphamide (CYC) and rituximab (RTX) induction therapy.

Methods In a single center, retrospective setting, the clinical data of patients treated for severe SLE were analyzed. Disease activity and the distribution of organ manifestations were characterized based on the SLEDAI-2K index. Changes in the SLEDAI-2K index and serological markers (anti-dsDNA, complement-3 and -4), the steroid dose - induction (initial iv. methylprednisolone dose), or cumulative - and the proportion of patients achieving low disease activity or remission (clinical SLEDAI = 0, prednisolone ≤5 mg/day) were evaluated at 6 and 12 months. The safety of the treatment was assessed by the number of adverse events and infections.

Results CYC: 33 cases (mean age 42.76±16.72 years). RTX: 35 cases (mean age 40.03±15.67 years). There were no significant differences in initial SLEDAI values (CYC: 17.46±9.47; RTX: 13.11±7.34; p=0.06) and the levels of the serological markers. With both treatments, SLEDAI and serological activity were significantly reduced by months 6 (SLEDAI: CYC: 6.54±4.85; RTX: 4.90±3.79) and 12 (SLEDAI: CYC: 4.92 ±4.13; RTX: 4.04±4.15), with no significant difference between the two therapeutic agents. However, after 12 months, in the RTX group more patients met remission criteria (CYC: 5.59%; RTX: 19.12%; p=0.017), and both induction (CYC: 1728 mg; RTX: 970.5 mg; p<0.001) and cumulative (CYC: 3970 mg; RTX: 2142 mg; p<0.001) corticosteroid doses were significantly lower. In the CYC group, adverse events occurred more frequently, although not significantly (CYC: 10.29%; RTX: 4.41%; p=0.141). Regarding infections a similar trend was observed (CYC: 20.59%; RTX: 13.24%; p=0.145).

Conclusions In consonance with the EULAR therapeutic recommendations, our results showed that in the setting of a severe SLE flare, CYC and RTX are both highly effective remission-inducing agents. However, a higher rate of clinical remission was achieved with rituximab than with CYC by 12 months. Furthermore, rituximab required significantly lower steroid doses than CYC to achieve these outcomes.

P149 CLINICAL WORSENING IN NON-ADHERENT BELIMUMAB TREATMENT IN SLE

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Objective The objective is to analyze the association between therapeutic adherence and disease activity in SLE patients.

Methods An observational, prospective study in SLE patients (SLICC/ACR criteria), treated whit subcutaneous Belimumab (200 mg/week) was made. Disease activity was measured by SLEDAI in three consecutive visits, and it was considered clinical worsening an increase of SLEDAI-score of ≥4 point. Persistence and adherence of Belimumab data during the follow-up were collected and were calculated based on the number of drug dispensing. Poor therapeutic adherence was established under the 95%.

Results Thirty-one prescriptions of Belimumab were registered (83.9% women) with a mean age of 48.1 (14.9) years. Time since the diagnosis was 12.5 (6.29) years and treatment period were 2.2 (1.4) years. Fifteen patients were considered as non-adherent (48.4%).

Persistence and disease activity data in each group were showed in the table 1.

Abstract P149 Table 1

	Non-adherent N=15 Mean (SD)/n (%)	Adherent N=16 Mean (SD)/n (%)
Age	48.53 (12.13)	47.69 (17.51)
Female sex	13 (86.7)	13 (81.25)
Anti-DNA	17.07 (20.29)	20.5 (29.1)
SLEDAI v0 SLEDAI v2	3.4 (2.13) 1.79 (2.01)	2.38 (2.33) 2.07 (2.09)
Delta_SLEDAI (v2-v0)	-1.73 (2.63)	-0.25 (1.48)
Adherence	81.01 (14.78)	99.51 (2.84)
Persistence_weeks	125.63 (62.64)	105.79 (80.64)
Duration therapy_days	879.4 (438.53)	740.56 (564.52)
Hypocomplementemia	7 (46.67%)	7 (43.75%)

Poor adherence was secondary to clinical improvement (66.67%), recurrent infections (13.33%), surgery (6.67%), pregnancy (6.67%) and inability to drug collect due to COVID-19 pandemic (6.67%). Non-adherent group showed worse SLEDAI-score than adherent group in V0, despite of a similar SLEDAI-score at V2 in both groups was observed. There was an association between poor therapeutic adherence and high delta_SLEDAI ($p=0.046$).

Conclusions We observed an association between poor therapeutic adherence and delta_SLEDAI. The high SLEDAI-score at the beginning of the study in non-adherent group would be due to clinical manifestations, despite of the similar serological activity in both groups.

P150 TEMPORAL TRENDS IN TREATMENT PATTERNS IN SYSTEMIC LUPUS ERYTHEMATOSUS IN SWEDEN

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Objective It is unknown how patients with SLE are treated in real-life settings in European countries and to what extent treatment recommendations regarding the prescription of antimalarials and glucocorticoids (GC) have been incorporated into practice. We aimed to examine treatment patterns in the first 5 years after SLE diagnosis in Sweden, trends over time, and how it relates to patient characteristics.

Methods In a cohort of 4,226 patients with incident SLE between 2005 and 2021 identified from the Swedish National Patient Register, information on drug dispensations, hospitalizations, outpatient visits, and comorbidities was obtained through linkage to Swedish population registers. Treatment patterns, including combinations of antimalarials and GC cumulative dose, were investigated in relation to year of diagnosis, patient characteristics, and comorbidities, using intersection and alluvial plots, logistic regression and non-parametric methods.

Results Among patients in this cohort (83% females, mean age 48.7 ± 18.2) the proportion with antimalarials the first year after diagnosis increased from 50% in 2005–2008 to 81% in 2017–2021 (adj. p<.0001). In patients with at least 5 years of observation time (n=2717 diagnosis 2005–2016), an increase with calendar time was also seen 5 years after diagnosis (from 44% to 63%, adj. p<0.0001). While the proportion with GC during the first year remained at 68%, the proportion on CS at 5 years after diagnosis decreased somewhat over time (from 54% to 47%, adj. p=.005). In the group exposed to GC, the median average daily dose over the first 5 years decreased among males (from 5.5 mg to 4.3 mg, p=.014), but not to the same extent among females (from 3.8 mg to 3.5 mg, p=.27).

Conclusions In the five years after SLE diagnosis, use of antimalarials have, in accordance with recommendations, increased in Sweden from 2005 to 2021. Despite recommendations to use less GC, however, a decrease of the cumulative GC exposure over time is only seen for males and the effect of this decrease on clinical outcomes is of interest and should be further studied.

P151 ACTILUP – HIGH INTENSITY INTERVAL TRAINING AND FATIGUE IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Objective The clinic of systemic lupus erythematosus (SLE) potentially leads to social isolation, inactivity, muscle loss and depression. In addition to medical treatment, the current EULAR recommendations, describes the relevance of physical activity and physical exercise as a non-pharmacological management option in patients with SLE.[1] A positive interaction with fatigue and the basic health-promoting effects of exercise are well-established.[2]

Methods The study will include 40 adult patients with moderate to severe fatigue. The duration of the study is 28 weeks divided into a 12-week monitoring phase, a 4-week interventional rehabilitation phase and a 12-week maintenance training phase.

The parameters collected consisted of laboratory parameters, doctor and patient related questionnaires, physical performance parameters and movement data based on a fitness tracker.

Fatigue was assessed using the FSMC and the Facit-fatigue.

During the rehabilitation phase, patients receive additional individual high-intensity interval training, basic endurance training and strength endurance training based on their cardiopulmonary capacities. The individualized training in the follow-up is carried out on one's own responsibility.

Results An analysis of the first 15 patients with an age of 48.1±11.7 years and a disease duration of 14.1±7.6 years showed an considerable increase in VO2peak from an average of 19.1 ml/min/kg to 20.7 ml/min/kg (p=0.051) in a preliminary analysis.

Facit-fatigue showed a significant improvement from 21.5 ±14 to 32.4±13.9 score points (p=0.016). However, surprisingly, the FSMC showed no significance (72.9±22 to 69.6 ±0.475, p=0.475). It should be noted that for both survey parameters, the scores after the intervention are below the cut-off values of severe fatigue.[3]

Likewise, the strength values, the activity times, the number of steps and the caloric turnover each showed significant differences (p<0.05). The VO2peak correlates with the FSMC (total. Mot. and cog.) as well as Facit-fatigue (p<0.001).

Conclusion Currently, 30 patients are enrolled in the study. Initial results are promising. Updated data will be presented, at the meeting.

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