less IL-1ß, and the expression of anti-inflammatory genes, such as IL-10, was upregulated. Furthermore, treatment with BTK inhibitor increased the rate of phagocytosis by anti-inflammatory M2 macrophages *in vitro*.

Conclusions Our findings show that BTK inhibition hinders M1 macrophage differentiation and skews monocytes towards an anti-inflammatory M2 phenotype, while enhancing apoptotic cell uptake by M2 cells. Therefore, BTK inhibition could have additional benefits in the treatment of autoimmune diseases such as SLE, by targeting both B cells and myeloid cells simultaneously.

Funding Source(s): This study was sponsored by EMD Serono Inc. (a business of Merck KGaA, Darmstadt, Germany)

217 CLINICAL AND SEROLOGICAL PROFILE OF A SERIES OF RHUPUS PATIENTS

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10.1136/lupus-2019-lsm.217

Background Concomitant presence of two autoimmune diseases, such as rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE) is known as Rhupus. Despite, poliautoimmunity is not uncommon described in patients with systemic autoimmune diseases, only a small series of patients have been described so far with Rhupus. Our purpose was to analyze clinical and serological characteristics of patients with Rhupus and compare them with a cohort of patients with SLE.

Methods In this cross-sectional study, we included cases of Rhupus (RA-ACR/EULAR 2010 plus SLE-ACR 1987 criteria) from different Rheumatology Departments at Catalonia, Spain. In addition, we included patients with diagnosis of SLE in a 2:1 ratio matched by sex and race. All information was recorded following an established protocol.

Results A total of 57 patients were included, 19 cases with Rhupus and 38 cases of SLE alone as controls. 93% of patients were female, Caucasian represented 71.4%, Mestizo 17.9% and 5.4% were Asian. Mean age was 48.6±13.5 years and mean disease duration was 11.48±9.1 years. Main clinical characteristics were cutaneous involvement (75.0%), hematological (66.0%), serositis (19.3%), renal disease (17.9%) and secondary Sjögren syndrome (28%) among others. Clinical and serological characteristics according groups are shown in table 1.

Conclusions We found some clinical and serological differences among patients with Rhupus and SLE alone. As expected, articular domains and titers of RF and ACPAs were higher in Rhupus and they are more commonly treated with methotrexate and rituximab. By other hand, leukopenia, oral ulcers, anti-Ro antibodies and higher SLEDAI score were more common among SLE patients. Whether Rhupus patients represent a different condition requires further analysis in bigger cohorts.

Abstract 217 Table 1 General characteristics of Rhupus and SLE patients

	Rhupus (n=19)	SLE (n=38)	*P value*
Gender (Female), %	17 (89.5)	36 (94.7)	*0.59*
Mean age, years±SD	56.9±12.8	45.9±12.3	*0.03*
Disease duration, years±SD	13.9±7.0	10.5±9.7	*0.24*
Race (Caucasian), %	14 (73)	27 (71.1)	*0.89*
Clinical characteristics			
Oral ulcers,%	2 (10.5)	16 (42.1)	*<0.01*
Articular involvement, %	19 (100)	36 (94.7)	*<0.01*
• Arthritis, %	19 (100)	29 (76.3)	*0.02*
• Erosive disease, %	11 (57.9)	1 (2.6)	*<0.01*
• Tenosynovitis, %	10 (52.6)	19 (26.3)	*0.05*
Leukopenia, %	3 (15.8)	21 (55.3)	*<0.01*
Renal involvement, %	1 (5.3)	10 (26.3)	*0.07*
Mean SLEDAI *	1.2±1.6	3.3±3.4	*0.03*
Immunological features			
Mean RF levels, IU±SD	184.6±199.3	47.6±114.5	*<0.01*
Mean anti-CCP titers, IU±SD	622.3±908.5	5.1±5.2	*<0.01*
Positive anti-Ro antibodies, %	15 (18.9)	17 (48.6)	*0.03*
Treatment (ever)			
Prednisolone, %	19 (100)	28 (75.7)	*0.02*
Methotrexate, %	17 (89.5)	13 (36.1)	*<0.01*
Rituximab, %	8 (44.4)	5 (14.7)	*0.04*

* Last visit

218 THERAPEUTIC TRAJECTORIES FOLLOWING HIGH DISEASE ACTIVITY STATE IN SLE

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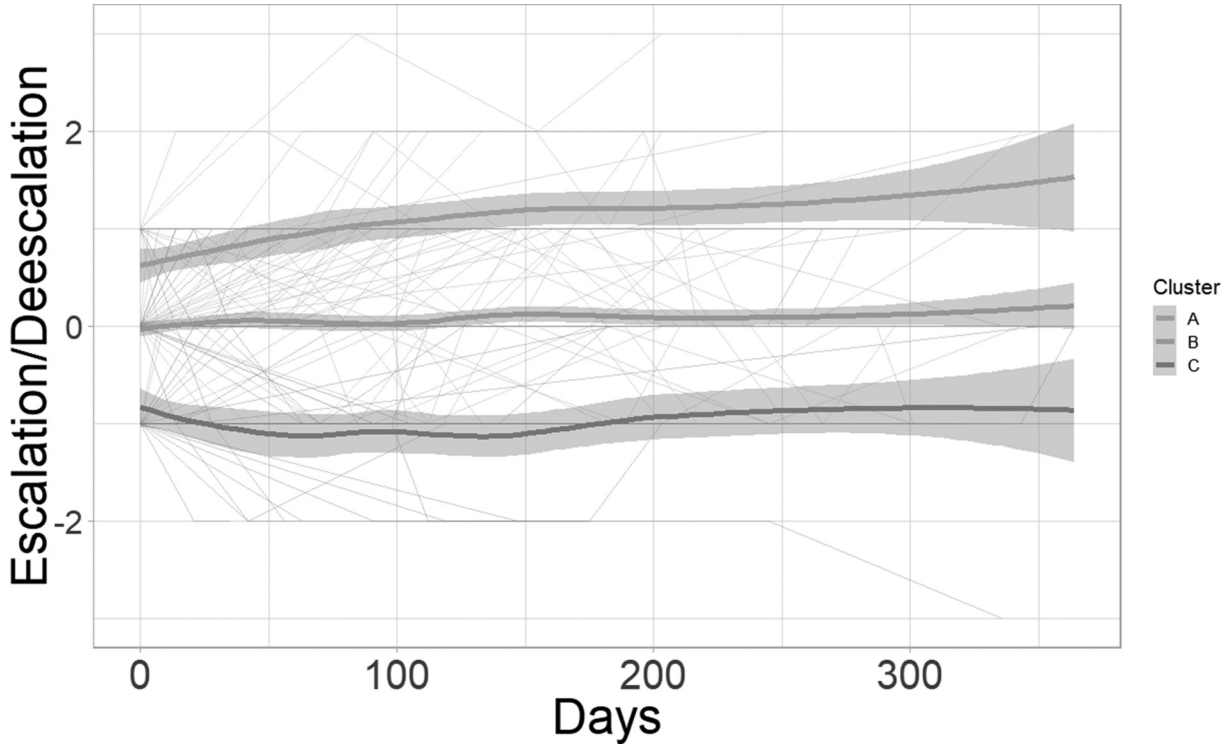
10.1136/lupus-2019-lsm.218

Background Systemic lupus erythematosus (SLE) is a heterogenous autoimmune disease. Treatment trajectories following high disease activity state (HDAS), as defined by SLEDAI score 10, have not been well described.

Methods Longitudinal trajectories of patients from the Australian Lupus Registry were studied. HDAS periods were defined as the time from which HDAS begins, until the patient fulfils criteria for Low Lupus Disease Activity (LLDAS), or up to 365 days. Treatment escalation is defined as either an addition of hydroxychloroquine (HCQ), prednisolone (PNL) and immunosuppressant (IS), or any change in IS drug. De-escalation is either dose reduction or cessation of HCQ or IS without meeting treatment escalation criteria. Treatment trajectories were examined as the rolling sum (over time) of escalations and de-escalations and were clustered using k-means clustering methods. Different clustering partitions were tested. The R package kml was used for cluster determination and quality criterion calculations. The differences in time to resolution of HDAS between clusters were tested using likelihood ratio test.



Abstract 218 Figure 1

The relationships between continuous covariates (cumulative PNL, number of escalations, number of de-escalations, time to first escalation, number of mild-to-moderate flares, number of severe flares and change in damage index) and cluster were examined using analysis of variance (ANOVA) and Tukeys HSD.

Results A total of 210 HDAS periods (104 patients) were identified. Of the HDAS periods, patients were classified as treatment naïve (10%), HCQ inadequate response (20%), IS inadequate response (68%), and combination IS inadequate response (2%). The most commonly used IS was mycophenolate (23% of all HDAS periods). The trajectories were categorized into 3 final clusters: Cluster A (42/210) had more escalations than Cluster B (132/210) and Cluster C (36/210), see figure 1. There was no difference between clusters in the duration of time spent in HDAS, but a trend for higher cumulative PNL in Cluster A and they had significantly more and earlier escalations than Cluster B and C. Damage accrual appeared to be highest in Cluster C (the de-escalators) although not statistically significant. There was no difference between the distribution of the baseline treatment groups in each cluster.

Conclusions Treatment trajectories can be described using clustering that examines treatment escalations and de-escalations. This pilot study showed that treatment trajectories appear to have an effect on clinical outcomes. Further studies are planned to explore the relationship of patient characteristics or physician treatment decisions have on these clusters.

Funding Source(s): nil

219 EFFICACY AND SAFETY OF BELIMUMAB IN EXTENSION STUDIES OF 74 PATIENTS WITH ACTIVE SEROPOSITIVE SYSTEMIC LUPUS ERYTHEMATOSUS. RESULTS OF A SINGLE BRAZILIAN CENTER

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10.1136/lupus-2019-lsm.219

Background Our clinical research center have been conducting evaluation for innovative therapies in patients with Systemic Lupus Erythematosus during the past 15 years. In the present study we combined the results observed on extension studies from four different trials in patients receiving either intravenous or subcutaneous, belimumab and evaluated for activity, adverse events, in Caucasian and Black Brazilian patients.

Methods Seventy four patients were part of the combined study.The Lupus Low Disease Activity State(LLDAS) that has been shown to be a valuable tool to detect response or failure in trials were used in this study and statistical comparisons between the different result groups were determined.The period of evaluation ranged from 12 to 48 months

Results Seventy four patients completed the initial study. Four refused to continue the extension evaluation. Seven belonged to the black group(10%), sixty three were Caucasian.(90%) One patient was discontinued due to pregnancy.Nine received the subcutaneous presentation.(12.8%) In subgroup analysis