leads to increase HCQ blood concentrations in the next samples after having stressed (and discussed!) the problem to the patient.

REFERENCES:

HCQ: hydroxychloroquine; ¹⁻² : $p < 0.005$ versus Group C; ³ : $p < 0.0005$ versus A and B Groups; other p values were non-significant; p values were calculated by unpaired t-tests and Fisher's exact tests, as appropriate.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.6927

FRI0211 A LOW AND PROMPTLY TAPERED STEROID REGIMEN CAN ACHIEVE EXCELLENT RESULTS IN LUPUS NEPHRITIS, WITH LESS ADVERSE EVENTS

Farah Tamirou¹, Nathalie Demoulin², Selda Aydin³, Frederic Houssiau¹.

¹Rheumatology Department, Cliniques universitaires Saint-Luc, Institut de Recherche Expérimentale et Clinique, Université catholique de Louvain, Brussels, Belgium; ²Nephrology Department, Cliniques universitaires Saint-Luc, Institut de Recherche Expérimentale et Clinique, Université catholique de Louvain, Brussels, Belgium; ³Pathology Department, Cliniques universitaires Saint-Luc, Institut de Recherche Expérimentale et Clinique, Université catholique de Louvain, Brussels, Belgium

Background: The optimal use of glucocorticoids (GC) in lupus nephritis (LN) remains a topic of debate, especially the tapering protocol and the duration of treatment. To date, only one randomized controlled trial, MyLupus, has compared two oral prednisolone (P) regimens in LN (0.5 versus 1mg/kg/d) in addition to mycophenolic acid. Although non-inferiority was not proven, this study demonstrated a similar rate of renal response at 24 weeks, with fewer side-effects in the 0.5mg/kg/d group.

Objectives: To determine by a retrospective study the efficacy and the toxicity of an even lower P regimen (20mg/d), very promptly tapered to 5mg/d at week 12 and stopped as early as at week 52.

Methods: Data from the last 30 consecutive proliferative LN patients diagnosed at the Louvain Lupus Clinic (between 2015 and 2018) were reviewed retrospectively. In these patients, the 10 last consecutive patients received a low fixed dose of P (20mg/d) for 4 weeks, rapidly tapered as follows: 15mg/d for 2 weeks, 12.5mg/d for 2 weeks, 10mg/d for 2 weeks, 7.5mg/d for 2 weeks, 5mg/d for 3 months and 2.5mg/d for 6 months. GC were withdrawn at week 52. The baseline and the follow-up data of these 10 patients were compared to the 20 previous consecutive LN patients followed in the same center but given a standardized P dose of 0.5mg/kg/d. Both groups of patients received 750 mg methylprednisolone IV pulses on 3 consecutive days at baseline. The one-year renal response was defined by achieving a proteinuria target < 0.8g/d.

Results: Clinical (BMI, gender, age, mean serum creatinine, mean proteinuria, SLEDAI-2K, non-steroid immunosuppressants) and pathological (ISN/RPS class) characteristics did not differ at baseline between the two groups. As illustrated in the Table, the mean uP/C ratios measured at one year were similar, as were the percentages of patients who achieved the proteinuria target. Importantly, *Herpes zoster* infections were only observed in the higher P dose group, with the difference reaching almost statistical significance.

	High dose P 0.5mg/kg/d N=20	Low dose P 20mg/d; 5mg/d at w12 N=10	P value
Baseline BMI (kg/m ²), mean ± SD	22.8 ± 4.0	23.4 ± 3.4	0.72
Baseline cumulative IV MP (g), mean ± SD	2.5 ± 1.9	2.1 ± 0.5	0.57
Baseline dose of oral P (mg), mean ± SD	39.5 ± 15.7	20 ± 0	0.0006
Baseline uP/C (g/g), mean ± SD	3.01 ± 2.30	2.05 ± 1.72	0.25
Month 12 dose of oral P (mg), mean ± SD	8.0 ± 6.5	0.8 ± 1.7	0.002
Month 12 uP/C (g/g), mean ± SD	0.61 ± 0.78	0.72 ± 1.23	0.75
Month 12 uP/C target (<0.8g/g), n (%)	16 (80)	8 (80)	1.00
<i>Herpes zoster</i> during GC treatment, n (%)	6 (30)	0 (0)	0.07

Conclusion: In patients suffering from proliferative LN, an induction protocol with a low and rapidly tapered dose of P may be as effective as

higher dose regimen to achieve the proteinuria target at one year, with fewer *Herpes zoster* episodes. These results deserve to be confirmed in a controlled trial.

REFERENCES:

BMI: body mass index; IV MP: intravenous methylprednisolone; P: prednisolone; uP/C: urine protein to creatinine ratio; P values were calculated by unpaired t-tests and Fisher's exact tests, as appropriate.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.6856

FRI0212 USE OF 23-VALENT POLYSACCHARIDE PNEUMOCOCCAL VACCINE IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS: THE RELATIONSHIP OF IMMUNOGENICITY WITH THERAPY

Galina Tarasova, Boris Belov, Daria Bukhanova, Maria Cherkasova, Sergey Solov'yev, Elena Aseeva, Tatiana Reshetnyak, Tatiana Popkova. V.A. Nasonova Research Institute of Rheumatology, Moscow, Russian Federation

Background: Immunization with pneumococcal vaccines is an important factor of the prevention of severe respiratory infections in patients with rheumatic diseases (RD). Vaccination in systemic lupus erythematosus (SLE) is designed to ensure the continuity of immunosuppressive therapy, reducing the risk of severe exacerbations and death, and is effective from a pharmaco-economical standpoint.

Objectives: Investigation of the immunogenicity of 23-valent polysaccharide pneumococcal vaccine (PPV-23) in patients with SLE, as well as the effect of immunosuppressive therapy on the vaccinal response.

Methods: 34 patients with a reliable diagnosis of SLE (30 women and 4 men aged 19 to 68 years) were included. The duration of the disease varied from 9 months to 20 years. At the time of vaccination, 3 patients had high, 4 – moderate, 22 – low disease activity, and 5 were in remission. Current therapy: 33 patients received glucocorticoids (GC) 5-30 mg/day in prednisolone equivalent, 27 – hydroxychloroquine, 17 – cytotoxic agents (CA) (7 – mycophenolate mofetil, 6 – methotrexate, 1 – mycophenolic acid, 3 – azathioprine, 2 – cyclophosphamide), 11 – biologics (BS): 5-rituximab (RTM), 6 – belimumab (BLM). RTM was administered in doses of 500-1000 mg every 6-12 months, BLM – from 400 to 720 mg every month. 0.5 ml of PPV-23 (1 dose) was administered subcutaneously. During the visits standard clinical and laboratory tests were performed, as well as determination of antibody (AB) to *S.pneumoniae* serum level with VaccZymeTMPCP Ig 2 sets (TheBindingSiteLtd, Birmingham, UK).

Results: 1 and 3 months after vaccination, most patients (82.4% and 96.7% respectively) had a significant (more than 2 times compared to baseline) increase of the concentration of AB to the *S. pneumoniae* cell wall polysaccharides. A year after the vaccination, 22 (64.7%) patients (responders) had a significant increase of the concentration of anti-pneumococcal AB. 12 (35.3%) patients were considered as non-responders, they did not have a significant increase of the AB level (table).

Table. Change of anti-pneumococcal antibody concentration in SLE patients during the first year after the vaccination (n=34).

	baseline	1 month	3 months	12 months
Antibody concentration mg/l	83.5 ^a	407.8 ^b	311.4 ^c	255.3 ^d
Me	(57.4; 117.4)	(195.5; 476.8)	(181.5; 423.8)	(109.6; 423.5)
(25;75 percentiles)				
responders		28	29	22
n		(82.4%)	(96.7%)	(64.7%)

p a-b=0,000002; p a-c=0,00009; p a-d=0,0002.

Among 11 patients receiving BS, a complete vaccinal response was observed much less frequently than in patients without these drugs, 36.4% and 78.3%, respectively, $p=0.04$.

In the group treated with RTM, the number of non-responders was greater than among patients receiving BLM (80% and 50%, respectively), but this difference is not significant, $p=0.6$.

The addition of CA to the treatment regimen did not have an additional negative effect on the vaccinal response.

Conclusion: Sufficient immunogenicity of PPV-23 was shown in patients with SLE, including those receiving combined immunosuppressive therapy.

At the same time, the use of anti-B-cell drugs in combination therapy resulted in a significant decrease of the vaccinal response

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.3646

FRI0213

RANDOMIZED PLACEBO CONTROLLED TRIAL OF ABATACEPT FOR NON-ORGAN THREATENING SYSTEMIC LUPUS WITH BACKGROUND MEDICATIONS WITHDRAWN

Aikaterini Thanou¹, Cristina Arriens¹, Teresa Aberle¹, Eliza Chakravary¹, Samera Vaseer², Joe Rawdon¹, Judith A. James¹, Joan Merrill¹. ¹Oklahoma Medical Research Foundation, Oklahoma City, United States of America; ²The University of Oklahoma Health Sciences Center, Oklahoma City, United States of America

Background: Abatacept (ABA) is a fusion protein of the extracellular domain of CTLA4 and the Fc domain of human IgG1, constructed to inhibit B/T cell co-stimulation. Previous studies of ABA in lupus failed to show benefit in overall disease activity, but improvement in arthritis was suggested.

Objectives: This 6-month randomized, double-blind, placebo-controlled (PBO) study withdrew background medications to facilitate the assessment of ABA in patients with SLE arthritis.

Methods: Patients were entered with moderate to severe arthritis [BILAG A or B with ≥ 3 swollen and ≥ 3 tender joints (28 joint count)]. All DMARDs except prednisone (up to 20mg daily) were withdrawn by baseline and patients were randomized 1:1 to weekly sc ABA or PBO. One or more DepoMedrol injections (≤ 320 mg total) was allowed by end of Month 2. Additional steroids or immune suppressants (IMS) at any time, and transition to open label ABA at Month 3 or later, were allowed, but designated non-response. The primary endpoint was BICLA response at Month 6 compared to screening. Secondary objectives included SRI-4, SLEDAI 4-point improvement, SLEDAI arthritis resolution, BILAG A/B musculoskeletal (MSK) improvement, as well as low disease activity defined by either SLEDAI 2 or Lupus Low Disease Activity State (LLDAS) at Month 6. Flares were evaluated by the modified SELENA-SLEDAI flare index (1) in patients followed after baseline.

Results: 66 patients were randomized and received at least one dose of the study drug, 31 ABA and 35 PBO. 7 withdrew prior to Month 6. Placebo response rates were lower than in most SLE trials, but no primary or secondary endpoints were met, see table (Fischer's exact test).

	ABA (n=31)	PBO (n=35)	p value
BICLA	8(26%)	8(23%)	>0.999
SRI-4	9(29%)	8(23%)	0.587
SLEDAI 4-point improvement	9(29%)	8(23%)	0.587
SLEDAI arthritis improvement	9(29%)	8(23%)	0.587
BILAG A/B MSK improvement	9(29%)	8(23%)	0.587
SLEDAI 2	8(26%)	7(20%)	0.769
LLDAS	6(19%)	8(23%)	0.772

Flares were evaluable in 64 patients (31 on ABA, 33 on PBO). 14 (45%) patients on ABA vs. 18 (55%) on PBO had a moderate/severe flare by Month 6. 22 (71%) patients on ABA vs. 23 (70%) on PBO experienced flare or treatment failure (early drop off or off protocol steroids or IMS) by Month 6. Rates of flare and treatment failure by Month 6 did not differ between groups (Log-Rank test, $p=0.688$ and $p=0.631$, respectively). The safety profile of ABA was consistent with known effects of the treatment.

Conclusion: ABA did not demonstrate improvement vs placebo in controlling disease activity or flare in SLE patients in a protocol that mandated IMS withdrawal. Placebo response rates of $\leq 23\%$ support the validity of these results. Since some evidence suggests potential efficacy of ABA for certain biologic subsets of SLE (2), immunophenotyping may prove helpful.

REFERENCES:

- Thanou A, Chakravarty E, James JA, Merrill JT. Rheumatology (Oxford) 2014;53(12):2175-81.
- Bandyopadhyay S, Connolly SE, Jabado O, Ye J, Kelly S, Maldonado MA, Westhovens R, Nash P, Merrill JT, Townsend RM. Lupus Sci Med. 2017 4 (1): e000206.

Disclosure of Interests: Aikaterini Thanou Grant/research support from: Bristol-Myers Squibb, Consultant for: Neovacs, Cristina Arriens Grant/research support from: Bristol-Myers Squibb, GSK/HGS, Consultant for:

GSK, AstraZeneca, Teresa Aberle: None declared, Eliza Chakravary: None declared, Samera Vaseer: None declared, Joe Rawdon: None declared, Judith A. James: None declared, Joan Merrill Grant/research support from: Genentech, UCB, GSK, EMD Serono, Pfizer, Celgene, Exagen, Bristol Myers Squibb, Medimmune/Astra Zeneca, Lilly, Amgen, Xenacor, Neovacs, Consultant for: Genentech, UCB, GSK, EMD Serono, Pfizer, RemeGen, Celgene, Exagen, Bristol Myers Squibb, Medimmune/Astra Zeneca, Lilly, Immupharma, Amgen, Janssen, Sanofi, Neovacs, Anthera, Speakers bureau: UCB, GSK, EMD Serono, Bristol Myers Squibb, Medimmune/Astra Zeneca, Janssen

DOI: 10.1136/annrheumdis-2019-eular.2526

FRI0214

EFFICACY OF RITUXIMAB AND CYCLOPHOSPHAMIDE TREATMENT IN PATIENTS WITH PRIMARY SJÖGREN'S SYNDROME AND PAROTID GLAND MALT LYMPHOMA

Anna Torgashina, Bogdan Chalcev, Evgeniya Sokol, Vladimir Vasiliev. Nasonova Research Institute of Rheumatology, Moscow, Russian Federation

Background: Mucosa-associated lymphoid tissue (MALT) lymphoma occurred in a higher frequency and at an earlier age in primary Sjögren's syndrome (pSS) than reported for MALT lymphoma in the general population. The optimal treatment of MALT lymphoma in pSS has not been defined.

Objectives: to analyze retrospectively the long-term clinical course of pSS in patients with MALT lymphoma.

Methods: 63 SS patients with MALT lymphoma were retrieved from our pSS database. Most of the 63 pSS-lymphoma patients were female ($n=60$; 95%). pSS was diagnosed at a mean age of 51 (43-58) years and lymphoma at a mean of 7 (2-10) years later. Total mean follow-up was 5 years (2-8). 14 patients received immunomodulator agents for SS before the development of lymphoma (low doses of prednisone - 8 patients, chlorambucil - 7, cyclophosphamide - 3 patients). In 43 patients, the diagnosis of SS and MALT - lymphoma were established simultaneously. Clinical features and treatment outcome of MALT - lymphoma as well as SS activity was evaluated.

All patients had features of autoimmune disease (ANA-100%, RF-90%, anti-Ro or/and anti-La antinuclear antibodies-94%) and met the diagnostic criteria of the Association of Rheumatologists of Russia for primary Sjögren's syndrome: salivary gland involvement (stimulated parotid flow rate < 2.5 ml in 5 min, parotid sialography showing the presence of diffuse punctuate or globular shadows with a diameter > 1 mm., histopathology: a focus score > 2 per 4mm² in minor salivary gland biopsy), keratoconjunctivitis sicca (stimulated Schirmer's test < 10 mm in 5 min, tear break-up time < 10 seconds, rose Bengal test or fluorescent test $> 1+$), presence of abnormal concentrations of at least one of the serum autoantibodies (anti-Ro, anti-La, antinuclear antibodies, IgM-rheumatoid factor). The histologic and immunohistochemical diagnosis of lymphoma was performed with B-cell clonality determination in salivary gland tissue.

Patients were treated with RTX (25 patients) or RTX+CPH (38 patients). Patients received 2 1g intravenous infusions of RTX 2 weeks apart, then 375 mg every 3 months for 2 years. Cyclophosphamide 1000 mg was administered every two weeks for a period of 12 weeks.

Results: MALT lymphoma was localized in parotid glands in 60 cases, submandibular salivary glands - in 2 cases, lacrimal gland - in 1 case. Eleven patients showed systemic features (7-purpura, 1-peripheral neuropathy, 3 - nephritis). Blood serum and urine examination revealed monoclonal secretion in 16/56 patients (7-IgMk, 4-IgGk and IgG, 2-IgAk and 3 - Bjk). Nineteen of 56 (34%) patients had cryoglobulinaemia.

After follow-up of 24 mo, complete clinical remission (CR) of MALT lymphoma (normalization of salivary gland size, disappearance of lymphadenopathy and cytopenia) was obtained in 25 (72%) in the group of RTX and 35 (92%) in the group of RTX+CPH ($p=0.05$). An incision biopsy of the parotid gland before and after therapy was made in 21 patients. Complete disappearance of histological pattern of MALT lymphoma was shown in 50% of the RTX treated patients and in 66% patients with combined therapy. B-cell clonality in parotid glands disappeared in 3/5 cases after RTX monotherapy and in 1/4 cases after RTX with CPH therapy. Cryoglobulinaemia disappeared in 33% patients in group of RTX and 46% in group of RTX+CPH ($p=0.6$).

Conclusion: Complete clinical remission of the lymphomas was achieved significantly more often in the group treated with RTX plus cytostatic agent in comparison with patients who had RTX monotherapy.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.8251