H2(90min)	27(14,59)	27(11.5,55)	0.600
CH4(0min)	4(3,5)	4(3,5,5)	0.699
CH4(30min)	5(4,6)	5(3,5,7)	0.776
CH4(60min)	5(4,5)	5(3,3,6)	0.057
CH4(90min)	5(4,5)	5(4,6,5)	0.142
H2+CH4(0min)	20(12,5,35,5)	26(9,39)	0.747
H2+CH4(30min)	32(19,50)	32(12,67)	0.872
H2+CH4(60min)	31(17,54)	30(13,5,64,5)	0.909
H2+CH4(90min)	31(20,63,5)	31(19,60)	0.000

Using Wilcoxon test, $P < 0.05$.

Disclosure of Interests: None declared

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AB0478

PREGNANCY OUTCOME IN WOMEN WITH SYSTEMIC LUPUS ERYTHEMATOSUS TREATED WITH HYDROXYCHLOROQUINE: 10 YEARS EXPERIENCE

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Background: Pregnancy in SLE patients is closely associated with the usage of hydroxychloroquine [1].

Objectives: To determine pregnancy outcomes in women with Systemic Lupus Erythematosus who were treated with hydroxychloroquine in Universiti Kebangsaan Malaysia Medical Centre.

Methods: Pregnant women with Systemic Lupus Erythematosus who had antenatal follow up and delivery in Universiti Kebangsaan Malaysia Medical Centre between 1st January 2007 and 1st January 2017 were retrospectively analyzed. Data collection was done via medical case notes and laboratory investigations. Study population was categorised into two groups based on hydroxychloroquine treatment during pregnancy. Incomplete pregnancy records were excluded.

Results: There were 82 completed pregnancies included with 47 (57.3%) in HCQ group and 35 (42.7%) in non HCQ group. Amongst HCQ users, there were significantly more pregnancies with musculoskeletal involvement ($p=0.03$), heavier mean neonatal birth weight ($p=0.02$) and prolonged duration of pregnancy ($p=0.001$). In non-HCQ users, the rate of recurrent miscarriages ($p=0.003$), incidence of hypertension ($p=0.01$) and gestational diabetes mellitus ($p=0.01$) and concurrent medical illness ($p=0.005$) were significantly more. Hydroxychloroquine use during pregnancy was protective against hypertension ($p=0.001$) and the gestational age at delivery had significant effect on the neonatal birth weight ($p=0.001$). However, duration of the disease had significant negative effect on the neonatal birth weight ($p=0.016$).

Conclusion: HCQ enhance better neonatal outcomes and reduce adverse pregnancy outcome and antenatal complications such as hypertension and diabetes.

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AB0479

RITUXIMAB MAY BE BENEFICIAL IN THE TREATMENT OF SEVERE FORMS OF SYSTEMIC AUTOIMMUNE DISEASES REFRACTORY TO STANDARD IMMUNOSUPPRESSIVE THERAPY. NINE-YEARS EXPERIENCE FROM SINGLE CLINICAL CENTRE

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Background: Rituximab (RTX) is anti-CD20 monoclonal antibody, registered for the treatment of rheumatoid arthritis (RA). It has been used in clinical practice "of

label" in various other conditions including systemic autoimmune diseases – systemic lupus erythematosus (SLE), systemic sclerosis (SSc), Sjögren's syndrome (SjS), polymyositis (PM) and dermatomyositis (DM) and ANCA associated vasculitides, but the results of clinical studies are inconherent. Nevertheless, RTX is frequently used in patients with severe forms of systemic autoimmune diseases with organ involvement after failure of conventional immunosuppressive treatment. In Czech Republic, RTX may be used "of label" upon a special request in these special cases.

Objectives: To evaluate indications, clinical characteristics, general efficacy, safety and the impact of RTX therapy in patients with systemic autoimmune diseases treated in the Institute of Rheumatology, Prague since 2009 (a retrospective study).

Methods: The medical reports of all patients treated with RTX for other diagnosis than RA were analyzed and the clinical data (diagnosis, previous treatment with glucocorticosteroids and immunosuppressive drugs, number of RTX infusion, side effects and global evaluation of the efficacy by physician) were collected and analyzed.

Results: In the years 2009 – 2018, 50 patients with various systemic autoimmune diseases were treated with RTX in our clinic (SLE: $n=8$, SjS: $n=2$, SSc: $n=16$, PM: $n=6$, DM: $n=3$, MCTD: $n=1$, ANCA associated vasculitides: $n=11$, overlap syndromes: $n=3$). Mean age of the group was 48.12 ± 12.9 years at the first RTX treatment and all of the patients experienced previous failure of treatment with 1-6 immunosuppressants. The total number of RTX infusions was 208 with mean 5.32 applications per patient. We have followed the patients for 37.1 months (mean), ranging from 2-114 months. During the follow-up two patients died due to complications of the disease, two patients were lost from the follow-up. The treatment was effective in majority of patients ($n=27$) and global efficacy was evaluated as "excellent" in 2, "very good" in 10 and "good" in 15 patients. In seven patients the treatment had no effect and in 4 patients the effect could not be evaluated due to short time follow-up. The treatment was well tolerated by patients and we have experienced 39 moderate or severe infections (requiring antibiotics or hospitalization) mostly in patients with ANCA associated vasculitides. In several patients, mild decrease of IgG levels following the RTX treatment was observed but only in one patient required a subsequent substitution with immunoglobulins. We have not observed any malignancy in the group. The detailed characteristics and results of the patients by diagnosis are provided.

Conclusion: Rixuximab may be beneficial in some patients with severe forms of systemic autoimmune diseases refractory to the standard immunosuppressive therapy. The treatment is generally well tolerated and the infections are the most common side effect.

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AB0480

PROLONGED CLINICAL REMISSION AND LOW DISEASE ACTIVITY STATUSES ARE ASSOCIATED WITH BETTER QUALITY OF LIFE IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Background:

Treat to target (T2T) strategies in systemic lupus erythematosus (SLE) have been developed in order to control disease activity, improve health-related quality of life (HRQoL), reduce organ damage and decrease mortality. Previous studies revealed that both remission and low disease activity (LDA) had comparable damage accrual as well as mortality. However, studies of HRQoL in these two targets are few and there has been no comparative study between them:

Objectives: To determine the association between disease activity status (DAS) and HRQoL in SLE patients.

Methods: SLE patients in out-patient clinic during the previous 12 months were included in the study. Systemic Lupus Erythematosus-specific Quality-of-Life questionnaire (SLEQoL) was measured at the last visit. DAS was determined retrospectively during the previous year. Three categories of DAS were defined: clinical remission (CR): clinical quiescent disease according to Systemic Lupus Erythematosus Disease Activity Index 2000 (SLEDAI-2K), prednisolone < 5 mg/day; low disease activity (LDA): SLEDAI-2K (without serological domain) ≤ 2 , prednisolone < 7.5 mg/day; and non-optimally controlled status: those who were not in CR/LDA. Immunosuppressive drugs (maintenance dose) and antimalarials were allowed. Both CR and LDA have been maintained for at least 1 year. The

association between DAS and HRQoL was assessed by using multiple linear regression analysis adjusting for other covariates.

Results: Of 237 SLE patients (pts), 100 pts (42.2%) achieved prolonged CR, 46 pts (19.4%) achieved prolonged LDA, and 91 pts (38.4%) were not in CR/LDA. Non-CR/LDA pts had significantly higher total SLEQoL score and in all domains compared with CR/LDA pts. No significant difference in SLEQoL domain scores was found between CR and LDA groups. Multivariable analysis revealed that non-CR/LDA was positively associated with SLEQoL score compared with CR/LDA (β 20.02, 95% confidence interval (CI) 6.81-33.23, $p < 0.003$). Moreover, non-CR/LDA was at a higher risk of impaired QoL (SLEQoL score > 80) compared with CR (hazard ratio (HR) 3.8; 95% CI 1.82-7.95; $p < 0.001$). However, there was no significant difference between CR and LDA in term of SLE-QoL score or impaired QoL. Other factors associated with higher SLEQoL score were damage index (β 10.55, 95% CI 4.63-16.48, $p = 0.001$) and anemia (β 27.84, 95% CI 8.48-47.19, $p = 0.001$).

Conclusion: Prolonged CR and LDA are associated with better HRQoL in SLE patients and have a comparable effect. Prolonged CR or optional LDA may be used as the treatment goal of T2T approach in SLE.

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AB0481 AUTOANTIBODIES' TITRE MODULATION BY ANTI-BLYS TREATMENT IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Belimumab is a human monoclonal antibody that inhibits soluble B lymphocytes stimulator (BlyS) and represents the only biological drug approved for Systemic Lupus Erythematosus (SLE) (1). Belimumab is effective in reducing disease activity, number of flares and blocking damage progression (2,3). Pooled data derived from clinical trials reported a reduction of anti-dsDNA, analysed by ELISA, anti-cardiolipin (aCL) and anti-Sm and anti-ribosomal protein antibodies (2,4). No data were published on anti-beta2glycoprotein I (GPI) antibodies and other anti-ENA specificities.

Objectives: Our aim was to analyse the effect of Belimumab therapy on high avidity anti-dsDNA, aCL, anti-beta2GPI, and other relevant anti-ENA specificities.

Methods: 50 patients with active SLE (mean SLEDAI-2K score: 7.18; SD:3), with a mean age of 39 years (SD:11) and mean follow-up of 13 years (SD: 7.8) were enrolled. Sera were collected at Belimumab starting (T0) and every 6 months until 24th month. Disease activity index (SLEDAI-2K) was collected at every timepoints. High avidity anti-dsDNA were detected by radioimmunological method, anti-ENA, anti-cardiolipin (aCL), anti- β 2 glycoprotein I (anti- β 2GPI) were analysed by ELISA.

Results: At baseline 86% of sera were positive for anti-dsDNA, 50% for anti-ENA, 20% for aCL and 28% for anti-beta2GPI. Anti-dsDNA became negative in 21%, anti-beta2GPI IgG in 33% and aCL IgG in 30% of sera, mostly at T6. Among anti-ENA, 6/10 (60%) anti-ribosomal and 3/17 (17.6%) anti-Sm positive sera became negative. A significant decrease of anti-dsDNA and anti-beta2GPI IgM titers were observed at all timepoints. IgG aCL titre showed significant decrease only at T18. Anti-ribosomal showed a significant titre decrease at T6 and T12, with seroconversion to negative at T18. Anti-Sm titre significantly dropped down at T6, then remained stable during time. A significant correlation between anti-dsDNA

and anti-ribosomal titre, and between SLEDAI ratio (SLEDAI value/SLEDAI T0) and anti-ribosomal titer ratio (value/value T0) were found.

Conclusion: Belimumab treatment induced a significant reduction of SLE-specific autoantibodies titre and IgM anti-beta2GPI. Anti-ribosomal titre decrease correlates with anti-dsDNA titre and improvement of disease activity.

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AB0482 MORE THAN ONE POSITIVITY FOR ANTIPHOSPHOLIPID SYNDROME DETERMINES LONG TERM ANTIBODY PERSISTENCE

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Background: It is generally assumed that once Antiphospholipid syndrome (APS) is diagnosed, patients should be treated with anticoagulation (ACO), possibly for a lifetime¹.

Objectives: Our main objective was the characterization of a group of patients with primary APS, evaluation of clinical profile, presence of APS antibodies (Ab) over time, recurrent thrombotic events and treatment.

Methods: Demographic and clinical features of patients with APS were identified through the Unit's database. APL significant titers were retrospectively collected, 3, 6 and 9 months, every 6 months until year 6, every year until the last follow-up. LAC and aPL Ab (anticardiolipin IgG and Beta-2 Glycoprotein 1 IgG) were considered positive or negative by DRVVT/ELISA. Comparisons were made using the Wilcoxon Rank Sum and Chi square tests, p values < 0.05 were considered statistically significant (SPSS 22).

Results: 5 patients were analysed; the majority were female ($n=49$); mean average age of APS diagnosis was at 40[$\pm$ 13] y-old. Evaluation period: 2 - 20 years. 52 patients had at least one thrombotic event: 7 arterial thrombosis, 30 venous thrombosis and 8 both arterial and venous thrombotic events; 7 patients had obstetrical APS and one of these had both thrombotic and obstetrical APS; 9 had severe non-thrombotic APS manifestations. Fifty-four patients are currently under warfarin, 8 of which had a thrombotic event despite ACO. Patients could be grouped into two distinct patterns: those that became persistently antibody negative (aPL-; $n=19$) and those in whom the antibodies remained positive, persistently or intermittently (aPL+; $n=48$). The major difference between groups was the occurrence of cumulative double or triple positivity in 69% of aPL+ versus 37% in aPL- ($p=0.026$). There were no significant differences in age, age at diagnosis, duration of the disease and frequency/type of thrombosis, between each group (Table I). From the group that became persistently aPL-, 3 patients suspended ACO, without any event after 2 years of follow-up.

Conclusion: Our study suggests that more than one aPL/LAC positivity is associated with antibody persistence over time. In our small series, as previously reported, ACO was safely discontinued in selected patients that become aPL-, in the absence of other risk factors for thrombotic events². Regular antibodies measurements may help identify a subset of patients in whom ACO may be safely discontinued under careful observation.

Table I. Demographic, clinical, laboratory and therapeutic characteristics of patients according to presence of aPL/LAC persistence

Characteristics	aPL/LAC neg (n=19)	aPL/LAC pos (n=48)	Statistic test	p
Current Age (median $\pm$ IQR range, y)	52 ($\pm$ 16)	53	Wilcoxon rank sum (WRS)	0,6