The drugs of choice were calcium nadroparin (Fraxiparin) 0.3 or 0.6 ml subcutaneously - depending on body weight, respectively, or Dabigatran etexilate (Pradaxa) 220 mg per day, or rivaroxaban (Xarelto) 10 mg per day.

Prevention of infectious complications. The first injection of antibiotic is carried out immediately before surgery achieve its maximum concentration in blood plasma just in the time of first incision. In the postoperative period, antibiotic therapy was carried out for at least 5 days. In 1 patient, the course of antibiotic therapy was prolonged and another broad-spectrum antibiotic was added due to a history of tuberculosis infection. Postoperative rehabilitation in patients with SLE met standard protocols: activation in bed and verticalization was carried out on day 1, standing with crutches and walking on day 2.

Conclusion: During the period of hospital stay in the early postoperative period, not a single one thromboembolic event developed, as well as no cases of infectious complication occurred. There was one case of dislocation of the femoral component of the endoprosthesis, which was immediately repaired in the early postoperative period.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.3031

AB0293

IDENTIFYING PREDICTORS OF SHORT-TERM RESPONSE TO RITUXIMAB IN PRIMARY SJOGREN'S SYNDROME

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Background: Randomised controlled trials of rituximab (RTX) in primary Sjogren's syndrome (pSS) have aimed to alleviate glandular symptoms and fatigue with only limited data on efficacy/effectiveness of the initial and repeat cycles of RTX on extra-glandular pSS.

Objectives: To assess the effectiveness of RTX on extra-glandular symptoms and identify predictors of short-term response with a view to personalised B-cell depleting therapy in patients with pSS.

Methods: An observational study was conducted in 40 consecutive RTX-treated pSS patients in a single centre for over 15 years. All patients fulfilled the 2002 AEG criteria and were CCP negative. Clinical response at 6 months was defined as ≥ 3 reduction of ESSDAI from baseline. B-cell subsets were measured using highly sensitive flow cytometry. Predictors of short-term response were analysed using penalised logistic regression.

Results: 38/40 (95%) patients were female, mean (SD) Age 54 (13.7) years, median (IQR) disease duration 5 (2-9) years, 39/40 (98%) had positive ANA, 26/40 (65%) were on concomitant immunosuppressant (IS). Mean (SD) ESSDAI at RTX initiation was 11.5 (6.7); main domains for RTX were articular (73%), skin (23%), PNS (15%) and muscular (15%). 169 RTX cycles were administered with a total follow-up of 165PY. In Cycle 1 (C1) RTX, the proportion of patient achieving ESSDAI response from baseline was 29/40 (73%; 95% CI 58-87). There were significant reductions in ESSDAI, daily prednisolone dose and IgG levels at 6 months (all $p < 0.05$). Of C1 responders, 23/29 received retreatment on clinical relapse; of which 8/23 (35%) lost response [secondary non-depletion non response (2NDNR) associated with anti-RTX antibodies=4 (17%) as we previously observed in SLE[1], side effects=2, ineffective=2]. Of C1 non-responders, 9/11 were retreated but only 2/9 responded in C2. Overall, 13/40 (33%) discontinued RTX within two cycles. In multivariable analysis, concomitant IS and achieving complete B-cell depletion in C1 reduced non-response to RTX (Table 1).

Conclusion: All pSS patients should be prescribed concomitant immunosuppressant with RTX and therapy should aim to achieve complete depletion. About 1 in 6 pSS patients lose response in repeat cycles which is associated with 2NDNR phenomenon. The use of humanised or type 2 anti-CD20mAbs should overcome these issues and improve the clinical response of extra-glandular pSS.

REFERENCES:

- [1] Md Yusof et al. ARD 2017 (2520 characters – allowed around 2600 as Table 1 is included too)

Table 1. MVA logistic regression of risk factors for RTX non-response

Predictors	Continued Response (N=27)	Non-response within 2 RTX Cycles (N=13)	Univariable OR (95% CI); p-value	Multivariable OR (95% CI); p-value
Age, mean (SD) per 10 years	55 (14)	52 (12)	0.87 (0.53-1.41); 0.572	Excluded from final model
Disease duration, median (IQR)	5 (2-9)	6 (3-9)	0.97 (0.87-1.08); 0.565	Excluded from final model
Concomitant IS, %	81.5%	30.8%	0.10 (0.02-0.46); 0.003	0.07 (0.01-0.52); 0.010
IgG, mean (SD), g/L	15.5 (6.3)	18.4 (5.8)	1.08 (0.97-1.20); 0.175	1.13 (0.97-1.32); 0.116
Clinical ESSDAI, median (IQR)	10 (6-16)	8 (6-10)	0.96 (0.85-1.08); 0.487	0.91 (0.79-1.05); 0.185
Baseline Plasmablast (x1000), 10 ³ cells/L, median (IQR)	2.6 (1-5.2)	2.3 (1.6-9.5)	1.00 (0.94-1.07); 0.885	Excluded from final model
Complete B-cell depletion post-RTX, %	55.6%	8.5%	0.07 (0.01-0.64); 0.018	0.04 (0.02-0.82); 0.036

Disclosure of Interests: Sophanit Pepple: None declared, Jack Arnold: None declared, Edward Vital Grant/research support from: Dr Vital has received honoraria and research grant support from Roche, Andrew Rawstron: None declared, Colin Pease: None declared, Shouvik Dass Grant/research support from: Dr Dass has received honoraria from Roche, Paul Emery Consultant of: Professor Emery has received consultant fees from Roche., Grant/research support from: Professor Emery has received research grants paid to his employer from Roche., Md Yuzaiful Md Yusof: None declared

DOI: 10.1136/annrheumdis-2021-eular.3266

AB0294

PREDICTORS OF CHLOROQUINE AND DERIVATES TREATMENT INVOLVING OCULAR TOXICITY: RESULTS FROM A COHORT

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Background: Chloroquine (CQ) and hydroxychloroquine (HCQ) have been employed in a huge range of indications, from autoimmune diseases (such as rheumatoid arthritis [RA], cutaneous lupus or systemic erythematosus lupus [SLE]) to infectious ones (as malaria or helminthiasis).¹ A newer purpose came upon the new coronavirus disease 2019 (COVID-19), where they seem to be effective modulating immune response. Controversial results have been published from clinical and observational data concerning its effectiveness.² Ocular toxicity have been described as a serious adverse event of these anti-malarial drugs and screening protocols have been displayed for its prevention.³

Objectives: To evaluate CQ/HCQ ocular toxicity and to identify potential predictors of appearance. Also to assess screening protocols compliance.

Methods: Demographic, diagnostic and treatment data were collected from patients under CQ or HCQ treatment in the Clinical University Hospital in Santiago de Compostela (Spain) during the first wave of the COVID-19 pandemic (January to April 2020).

Univariable logistic regression was performed to identify potential predictors of maculopathy. Variables with $p < 0.20$ were selected for multivariable testing. Stata 15.1 was used to perform statistical analysis.

Results: 503 patients taking CQ/HCQ were identified. 495 were women. Most frequent diagnosis were SLE (48.28%), cutaneous lupus (22.85%) and rheumatoid arthritis (RA, 12.54%). Mean age at diagnosis was 44.99 years (SD 17.88). 93.33% of patients were under treatment with HCQ. Mean age at beginning of CQ/HCQ treatment was 48.10 years (SD 17.79) and mean time between diagnosis and CQ/HCQ onset was 2.03 years (SD 5.50). Mean maximum HCQ dosage per patient was 3.83 mg/kg (SD 1.59; 252.57 mg per day, SD 89.98) and CQ was 3.24 mg/kg (SD 1.91; 219.49 mg per day, SD 103.90). Mean time under CQ/HCQ treatment was 6.39 years (SD 5.63). 20 patients developed maculopathy. Mean time between CQ/HCQ onset and maculopathy appearance was 2.67 years (SD 3.10). Only 25 patients did not complete ophthalmologic exams for maculopathy screening. After univariable analysis, higher age at diagnosis and age at beginning of CQ/HCQ treatment were identified as potential predictors of maculopathy ($p < 0.20$). After multivariable analysis, both higher age at diagnosis and higher age at CQ/HCQ onset were identified as predictors for suffering maculopathy under treatment with CQ/HCQ (OR 1.06 [CI95% 1.03-1.10] $p = 0.000$ and OR 1.09 [CI95% 1.02-1.16] $p = 0.008$, respectively).

Conclusion: Ocular toxicity remains as one of the most harmful and disabling adverse events in patients under CQ/HCQ treatment. Higher age at diagnosis and higher age at beginning of treatment appear to be risk factors for maculopathy appearance. Screening protocols are well-assumed by patients and seemed to be helpful for preventing and early identifying events. CQ/HCQ usage in COVID-19 patients should be individualized, specially in older patients, and protocols involving ocular toxicity should be implemented in the follow-up of this population.

REFERENCES:

- [1] T Dörner. Hydroxychloroquine in SLE: old drug, new perspectives. *Nat Rev Rheumatol* 6, 10-11 (2010).
- [2] S Chowdhury, J Rathod, J Gernsheimer. A rapid systematic review of clinical trials utilizing chloroquine and hydroxychloroquine as a treatment for COVID-19. *Acad Emerg Med*. 2020;27(6):493-504.
- [3] J C S Yam, A K H Kwok. Ocular toxicity of hydroxychloroquine. *Hong Kong Med J*. 2006;12(4):294-304.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.3278

AB0295

TREATMENT OF HIGH RISK/REFRACTORY OBSTETRIC ANTIPHOSPHOLIPID SYNDROME. A SINGLE CENTRE EXPERIENCE

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Background: The most efficacious strategy to manage pregnant patients with antiphospholipid syndrome (APS) who are at high risk of adverse pregnancy outcomes ± refractory to conventional heparin/low-dose aspirin treatment is currently unknown (1, 2).

Objectives: The purposes of this study were to investigate the efficacy and safety of a second-line treatment protocol administered in addition to twice daily low molecular weight heparin and low-dose aspirin to pregnant patients affected with high-risk ± refractory primary APS.

Methods: Patients were included in the study if satisfying the following criteria were: 1) the presence of triple antiphospholipid antibody positivity (IgG/IgM anti-cardiolipin + IgG/IgM anti-β2 Glycoprotein I antibodies + lupus anticoagulant), 2) previous thrombosis and/or a history of one or more early and severe pregnancy complications. The second-line treatment protocol included weekly plasmapheresis or immunoadsorption and fortnightly 1g/kg intravenous immunoglobulins.

Results: Twenty-four pregnancies occurring between 2002 and 2019 in 19 primary APS patients, (mean age 35.1 ± 3.5 SD) were monitored. Triple antiphospholipid positivity was detected in all 19 cases (100%). Seven of these women (36.8%) had a history of thrombosis, five (26.3%) one or more previous failed pregnancies associated to severe pregnancy complications and seven (36.8%) both clinical criteria. Twenty-three pregnancies (95.8%) produced live neonates (13 females and 10 males), all born between the 26th and 38th week of gestation (mean 33.6 ± 3.5 SD); birth weight percentile was 35.8 ± 24.1 SD and mean Apgar score at 5min 8.7 ± 1.1 SD. Due to premature birth (24th week) complicated by fetal sepsis, one pregnancy (4.2%) had a negative outcome. During the treated pregnancy there were no episodes of thrombosis; there were five cases (20.8%) of severe maternal complications during pregnancy or puerperium and four of fetal complications (16.6%), all followed by complete recovery after delivery. No side-effects of the treatment were registered.

Conclusion: Given the high live birth rate and the safety associated to it, the second-line treatment protocol described here could be taken into consideration when the treatment of a high-risk APS pregnancy ± refractory to conventional therapy is being evaluated.

REFERENCES:

- [1] Tektonidou MG, et al. *Ann Rheum Dis* 2019;0:1-9. doi:10.1136/annrheumdis-2019-215213
- [2] Giacomelli et al. *Autoimmun Rev*. 2020;102738. doi.org/10.1016/j.autrev.2020.102738

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.3449

AB0296

PASSIVE TRANSFER OF ANTI-SSA, ANTI-Ro52, AND ANTI-MITOCHONDRIAL M2 FROM INTRAVENOUS IMMUNOGLOBULIN PRODUCTS TO PATIENTS WITH RHEUMATIC DISEASES

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Background: Passive transfer of ANA and anti-SSA has been reported in patients with common variable immunodeficiency disorder who received intravenous immunoglobulin (IVIG). IVIG is also recommended to treat some special or life-threatening rheumatic diseases.

Objectives: This study was aimed to explore whether any extractable nuclear antibodies (ENAs) were transferred to these rheumatic patients who received IVIG therapy.

Methods: IVIG products of three batches were tested for ANA by using indirect immunofluorescent assay, and for ENAs by using line immunoassay (LIA) and chemiluminescence immunoassay (CLIA). These IVIG products were administered to rheumatic patients at a dose of 20g/dx3 days (day1 to day3). Serum samples of these patients before IVIG (day0) and after IVIG (day4, day8, day10, day12, and more than one month) were tested by using LIA and CLIA. Anti-SSA was also detected using ELISA.

Results: In these IVIG products, ANA was positive at a titer of 1:640 (cytoplasmic speckled) and 1:80 (speckled). Among 14 types of ENAs that could be tested using LIA, anti-SSA, anti-Ro52, anti-mitochondrial M2, and anti-centromere B antibodies were clearly detectable in IVIG products (Table 1). Likewise, another assay CLIA also detected the same positive autoantibodies in these products. LIA showed the highest concentration in anti-mitochondrial M2, while CLIA showed the highest concentration in anti-mitochondrial M2 and anti-Ro52. One 31-year-old male patient who was diagnosed as SLE (Figure 1) and one 72-year-old male patient who was diagnosed as necrotizing myositis received these IVIG products. Anti-SSA, anti-Ro52, anti-mitochondrial M2, but not anti-centromere B, were positive in the day4 serum samples, although all of these antibodies were negative at baseline (day0). The concentration of these antibodies decreased gradually as days passed and became undetectable around one month after IVIG.

Table 1. The concentration of autoantibodies in intravenous immunoglobulin products

	anti-SSA	anti-Ro-52	anti-mitochondrial M2	anti-centromere B	Cut-off
LIA(grey value)	20±3	28±3	69±10	19±4	≥11
CLIA (U/ml)	333±107	444±86	434±66	390±89	>20
ELISA (U/ml)	90±13	NA	NA	NA	>20

LIA, line immunoassay; CLIA, chemiluminescence immunoassay; ELISA, enzyme linked immunosorbent assay

Conclusion: This study preliminarily reported transient positivity of anti-SSA, anti-Ro52, and anti-mitochondrial M2 in rheumatic patients maybe because the passive transfer of these antibodies from IVIG products to the patients, although the potential influence of this transfer on the rheumatic diseases remained unknown.

Figure 1. The concentration of autoantibodies in a 31-year-old male SLE patient receiving intravenous immunoglobulin at a dose of 20g/dx3 days (day1 to day3). Serum samples of these patients before IVIG (day0) and after IVIG (day4, day8, day10, day12, and day51) were tested by using line immunoassay (LIA) and chemiluminescence immunoassay (CLIA). Anti-SSA was also detected using ELISA. The horizontal red lines were the corresponding cut-off values of each assay.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2021-eular.3544