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Background: Therapeutic apheresis (TA) represents a therapeutic option in pre-existing conditions or rheumatic diseases that occur during gestation. Although pregnancy is not a contraindication itself, due to the lack of evidence-based guidelines and the alleged risk of maternal and/or fetal adverse events, there is general resistance to its application during pregnancy.

Objectives: In this observational study we aimed to evaluate the efficacy and safety of TA in high-risk pregnancies in patients with rheumatic diseases, followed over a decade in a tertiary Center.

Methods: Between January 2005 and April 2019, 843 TA procedures were performed during 51 pregnancies in 43 patients: 745 plasma exchange sessions and 98 immunoadsorption sessions. TA was performed in 29 (57%) pregnancies of 21 (48.8%) patients with antiphospholipid antibody syndrome (APS), in 20 (39.2%) pregnancies of 20 (46.5%) patients with congenital heart block (CHB), in 1 (1.9%) pregnancy of 1 (2.3%) patient with systemic sclerosis (SSc) and 1 (1.9%) pregnancy of 1 (2.3%) patient affected by lupic nephritis (SLE).

Results: During the period considered, apheresis sessions applied to pregnant women were 7.1% of the total ($n = 13,251$). The average age at the first treatment was 33 years (range 24-43). The mean management age at the first apheretic treatment was 21 weeks (range 4-32). Twelve (1.4%) apheresis sessions were complicated by adverse events, none required or prolonged hospitalization. There were 44 (86.3%) live births, 3 (5.9%) spontaneous abortions and 2 (3.9%) voluntary terminations of pregnancy, 2 (3.9%) lost to follow-up. The average gestational age at birth was 35 weeks (range 24-37) and cesarean section was performed in 41 (80.4%) cases. TA was added to conventional therapy in 24/29 (82.7%) patients with APS, to the detection of fetal cardiac activity, while in 5/26 (17.3%) it was introduced when the first signs of pregnancy complications such as mild preeclampsia, HELLP and IUGR were detected. TA was started within 24 hours of atrioventricular block (AVB) detection; 10/20 (50%) mothers with CHB were diagnosed with 2nd degree AVB, 9/20 (45%) with 3rd degree AVB and one (5%) with sinus bradycardia and endocardial fibroelastosis. The patient with SSc was treated with TA twice a week from the 32nd SG until delivery, which occurred at the 36th SG, due to severe IUGR and oligohydramnios. The patient with SLE complicated by lupic nephritis was treated with TA twice a week, from the 26th SG until the birth, which took place at the 31st SG.

Conclusion: Our data have shown that TA in pregnancy is well tolerated. Close collaboration between rheumatologist, obstetrician and specialist in TA is essential to ensure a successful outcome of high-risk pregnancies.

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SAT0177

MULTITARGET THERAPY WITH TACROLIMUS AND MYCOPHENOLATE MOFETIL FOR TREATMENT OF LUPUS NEPHRITIS PRESENTED WITH RAPIDLY PROGRESSIVE GLOMERULONEPHRITIS

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Background: Although, most lupus nephritis patients present with chronic glomerulonephritis or nephrotic syndrome, some patients develop rapidly progressive glomerulonephritis (RPGN), which is a clinical syndrome characterized by rapid loss of renal function over a short period of time (days to months). Multitarget therapy using tacrolimus and mycophenolate mofetil (MMF) has been reported to be effective as induction therapy of Class III to Class V lupus nephritis¹. However, its efficacy on lupus nephritis presented with RPGN has not been well reported.

Objectives: We aimed to examine the efficacy of multitarget therapy on lupus nephritis presented with RPGN.

Methods: We retrospectively analyzed patients with biopsy-proven lupus nephritis, who clinically showed RPGN, and were treated by multitarget therapy with tacrolimus and MMF in our department. Data were expressed as mean±SD.

Results: Five lupus nephritis patients (3 female) with RPGN were treated by multitarget therapy as induction therapy. Mean age was 36.6±13.5 years old. Renal biopsy at treatment revealed Class IV(A) in 2, Class IV(A+C) in 1 and Class IV(A)+V in 2. The percentage of glomerular crescents was 23.1±25.4%. eGFR and proteinuria at the initiation of treatment were 46.8±11.5 mL/min/1.73m² and 7.7±3.4 g/gCr, respectively. Patients were initially treated with methylprednisolone pulse therapy followed by 0.8-1.0 mg/kg of prednisolone (PSL), 2-3 mg/day of

tacrolimus and 1000 mg/day of MMF. At 6 months, eGFR and proteinuria improved to 72.9±11.3 mL/min/1.73m² and 0.19±0.13 g/gCr, respectively. At 12 months, eGFR and proteinuria further improved to 76.8±7.8 mL/min/1.73m² and 0.10±0.07 g/gCr, respectively and the dose of PSL was reduced to 6.6±1.5 mg/day. Three patients became positive for cytomegalovirus antigenemia and were successfully treated with antiviral therapy.

Conclusion: Multitarget therapy is effective in lupus nephritis even in patients presented with RPGN.

References:

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SAT0178

HYDROXYCHLOROQUINE CONTROLS DISEASE ACTIVITY IN SLE AND MULTIMODAL IMAGING TECHNIQUES SHOULD BE USED TO DETECT OCULAR TOXICITY

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Background: Hydroxychloroquine (HCQ) is an immunomodulatory drug that has been shown to improve disease activity in systemic lupus erythematosus (SLE). However, retinal toxicity is an important concern.

Objectives: In this study we sought to evaluate the effect of HCQ on disease activity and damage in patients with SLE in whom HCQ was discontinued due to retinal toxicity and whether it could be restarted by a detailed ophthalmologic examination.

Methods: Patients who met SLE SLICC classification criteria and were on HCQ for at least 3 years after reaching Lupus Low Disease Activity State (LLDAS) following remission induction and were followed up for at least 3 years after termination of HCQ treatment due to retinal toxicity diagnosed with visual field test were analyzed. Disease activity (LLDAS and SLEDAI-2K) and both the number and severity of flares were recorded for each patient whilst on HCQ and after cessation of treatment. All patients were examined by two experienced ophthalmologists and were assessed by computerized visual field, optical coherence tomography (OCT), fundus autofluorescence (FAF) and fundus fluorescein angiography (FFA) to further analyze toxicity.

Results: Out of 88 patients with recorded HCQ retinal toxicity in a cohort of 1500 patients with SLE, 64 patients (mean age at diagnosis 33.4 ± 10.5 (10-57); 88.5% female) with complete data and ophthalmologic re-examination results were included in the analyses. The average duration on HCQ was 122 ± 85 (39-336) months, and the mean follow-up time was 74.6 ± 48.3 (36-239) months after the drug was discontinued. Comparison of mean disease activity in the 3-year period when patients were on HCQ to 3 years post-cessation revealed a significantly lower mean SLEDAI-2K score in the former (0.89±1.28 vs. 1.3±1.6, p=0.02). The % of visits maintaining LLDAS was higher during HCQ treatment (89.7 ± 17.6 vs. 80.1 ± 23.5, p=0.001). There was significantly a higher frequency of flares with a dominance of mild-moderate types after HCQ was ceased (47.5 vs. 26.2%, p=0.03; 39.3 vs. 22.9%, p=0.024 respectively). There were more patients with serious flares in the post-discontinuation period but without statistical significance (13.1% vs. 4.9% p=0.08). Thirty-seven (60%) of patients restarted the treatment after ophthalmologic examination. Although 38 (62.3%) patients had visual field defects in the latest examination, multimodal imaging with OCT, FAF and FFA revealed that only 19 (31%) patient had typical retinal toxicity. Five patients were found to have macular atrophy due to other causes (4 age related macular degeneration and 1 vitreomacular adhesion). Since the discrimination of macular pathology would not be possible with imaging in these patients, HCQ was not prescribed. Comparison of patients with and without retinal toxicity showed that duration of HCQ use and HCQ-free time was not significantly different between patients.

Conclusion: HCQ is effective in controlling disease activity in patients with SLE and an opportunity for re-medication with HCQ is valuable. More than half of the