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AB0460 **USE OF PLATELET RICH PLASMA (PRP) IN TREATMENT OF DRY EYE SYNDROME IN THE PATIENTS WITH SJÖGREN SYNDROME: PRELIMINARY RESULTS**

Annunziata Capacci¹, Francesco Ricci², Valentina Varriano³, Barbara Tolusso¹, Pietro Rubortone³, Anna Maria Paglionico¹, Antonio Ciardiello^{2,4}, Stefano Alivernini^{1,3}, Gianfranco Ferraccioli³, Elisa Gremese^{1,3}. ¹Fondazione Policlinico Universitario A. Gemelli IRCCS, Division of Rheumatology, Rome, Italy; ²Fondazione Policlinico Universitario A. Gemelli IRCCS, Division of Ophthalmology, Rome, Italy; ³Università Cattolica del Sacro Cuore, Division of Rheumatology, Rome, Italy; ⁴Università Cattolica del Sacro Cuore, Division of Ophthalmology, Rome, Italy

Background: Xerophthalmia and xerostomia are the hinge symptoms of Sjögren Syndrome and often they negatively influence patients' quality of life. The eyewashes use based on Platelet Rich Plasma (PRP) has been applicable in the treatment of the xerophthalmia, both primitive and secondary.

Objectives: To evaluate the effect of subconjunctival injections and PRP based eyewashes on the ocular dryness (subjective and objective) in patients suffering of primary Sjögren syndrome (pSS).

Methods: Six pSS patients (6 females, age at the beginning 48.2±9.7 years) have been recruited in the study. All patients were reaching the criteria for pSS diagnosis; for each patient clinical and immunological data have been recorded. Patients with Schirmer Test value, in at least an eye, inferior to 10 mm after 5 minutes, and suffering from severe dryness calculated by OSDI score (between 33 and 100, severe condition of dry eye) in spite of therapies with tear substitutes were selected. The OSDI (Ocular Surface Index) is a questionnaire for the evaluation of the subjective ocular dryness. Selected patients have been addressed to treatment with PRP. The PRP is constituted by human plasma enriched with plaques by means of the utilisation of a special kit, therefore each patient has been subjected to a blood drawing, from which PRP has been extracted. Of this, a part has been injected in subconjunctival seat; from remained one, an eyewash has been extracted that the patients have assumed 6 times in the day up to exhaustion (about 5 days) during which another topic therapy was not used. The patients have been valued to the basal time and after ten days of the procedure; besides follow-up visits each three months are scheduled. To each evaluation Schirmer Test data and OSDI have been checked.

Results: Each patient had severe xerophthalmia, evaluated by Schirmer Test (right eye: 3.33±2.66; left eye: 6.83±6.5) and index OSDI (59.71±20.72). All the patients had Schirmer Test values, in at least an eye, lesser than 10 mm after 5 minutes. The analyzed cohort had homogeneous clinical characteristics (presence of xerostomy and absence of inflammatory indexes, hypergammaglobulinemia, arthritis and lymphadenomegaly). After one week (T1), OSDI values were significantly more reduced compared to the basal time (38.89±15.12; p=0.028). The Schirmer Test values were not significantly different to the follow-up visit compared to the basal one. No patients presented pre- and post-procedural complications, neither related infectious events. At 3 months follow up after first treatment (T2) no statistically significant difference in OD/OS Schirmer test values and OSDI score compared to the basal time were observed.

Conclusion: The use of PRP in dry eye syndrome in patients with Sjögren syndrome seems to be effective in alleviating symptoms and improving patients' life quality. Is need further follow-up to confirm data, to value effect also on the objective tests and to evaluate necessity of repeating treatment.

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AB0461 **BELATACEPT IN SLE KIDNEY TRANSPLANT PATIENTS**

Irene Carrión Barberá¹, Melissa Fajardo², Demetra Tsapepas², Hilda Fernandez², Anca Askanase³. ¹Hospital del Mar, Rheumatology, Barcelona, Spain; ²Columbia University Medical Center, Nephrology, New York, United States of America; ³Columbia University Medical Center, Rheumatology, New York, United States of America

Background: Lupus nephritis (LN) results in the need for renal replacement therapy (RRT) in 10-30% of LN pts; of these 30% receive a kidney transplant (KT). Belatacept (bela) is a second-generation selective T-cell co-stimulator blocker (inhibits CTLA-4) used as an alternative to calcineurin inhibitors (CNI) for maintenance regimens after KT. The pathogenic relevance of CTLA-4 inhibition and the favorable cardiovascular profile of bela make it an attractive therapeutic option in SLE. Additionally, bela IV ensures therapeutic adherence.

Objectives: The current study was initiated to evaluate the effect of bela on graft function and extrarenal SLE.

Methods: This retrospective single-center study evaluates the outcomes of LN KT recipients treated with bela from 2006–2018 at the Columbia University Lupus and Renal Transplant Cohorts. The bela regimen was 5mg/kg every 2 weeks x 5 doses, then monthly. CNI weaning among the bela group was not standardized. Immunosuppressive regimen, kidney allograft function, and SLE activity were examined.

Figure 1: Creatinine trend before and after bela

Figure 2: SLEDAI-2KG before and after bela

Table 1: Characteristics of patients on bela.

ID	Age at SLE dx	Race	LN class	Time to KT (yrs)	Type KT	Induction	Reason for conversion	Immunosuppressive regimen before conversion
A	16	Black	IV, VI	13	DDKT	ATG	Non-adherence	TAC, MMF
B	30	Asian		2	LRKT	ATG	Mod IFTA & Arteriosclerosis	TAC, MPA, PRED
C	18	White	IV, V	23	DDKT	ATG	Cortical necrosis	CYC, MMF, PRED
D	19	Black	V	9	LUKT	ATG	CNI side effects	TAC, MPA, PRED
E	22	Asian		5	LRKT	ATG	CNI side effects	TAC, MMF, PRED
F	18	Black	V	17	DDKT	Alemtuzumab	CNI side effects	TAC, MMF, PRED
G	25	White (Hispanic)	III, IV	23	DDKT	Basiliximab	TMA (biopsy)	TAC, MPA, PRED

Results: 48 pts with LN had undergone KT between 2006–2018 with follow-up time of 72.2 ± 74.6 months. Bela was started in 7 pts on CNI regimens (TAC N=6, cyclosporine N=1) at 15.5 ± 17.1 months after KT. All pts were female, age at SLE diagnosis 21.1 ± 4.9 yrs; 5 had undergone RRT prior to KT (4 hemodialysis, 1 peritoneal dialysis) for 38.7 ± 37.8 months. The interval between SLE diagnosis and KT was 13.1 ± 8.3 yrs. At the time of bela initiation, all pts were also treated with prednisone (7.1 ± 2.7 mg/day), 6 with mycophenolate (1123 ± 625 mg/day), and 1 azathioprine (25mg/day). CNIs were continued in 5/7 patients at 6 months after bela. 2 pts were on hydroxychloroquine, 2 took it only prior to KT. In 5 patients, creatinine stabilized 6 months after bela, 1 returned to HD due to CNI-toxicity and pyelonephritis and 1 is relisted for KT due to ACR and cortical necrosis (Fig. 1). No allograft failure due to recurrent

LN was noted in any of the 7 pts. 5 pts are followed by Rheumatology for extrarenal SLE; no extrarenal manifestations are documented in the other 2. Data on SLE Disease Activity pre and post bela were available and scored in 3/5 pts using the SLEDAI-2KG which accounts for clinical and laboratory manifestations, as well as steroid use (Fig. 2). Mean ds-DNA pre and post bela was 133 ± 178 UI/mL and 58 ± 72 UI/mL; C3 89 ± 31 mg/dL pre and 91 ± 21 mg/dL post; C4 35 ± 15 mg/dL pre and 38 ± 7 mg/dL post.

Conclusion: Bela in LN KT recipients may decrease extrarenal manifestations, attenuate CNI toxicity and stabilize allograft function, providing a better alternative to CNI regimens. Furthermore, these data suggest that bela may be a therapeutic option in SLE.

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AB0462 IMMUNIZATION TO RITUXIMAB IS MORE FREQUENT IN AUTOIMMUNE SYSTEMIC AUTOIMMUNE DISEASES THAN IN RHEUMATOID ARTHRITIS AND MAY BE MANAGED BY SWITCHING FROM RITUXIMAB TO OFATUMUMAB

Alice Combiér, Gaetane Nocturne, Julien Henry, Rakiba Belkhir, Stephane Pavy, Xavier Mariette, Raphaële Seror. *Bicêtre Hospital AP-HP, Rheumatology, Le Kremlin-Bicêtre, France*

Background: The most widely used B cell targeted therapies in autoimmune diseases (AID) is Rituximab (RTX), a murine chimeric monoclonal antibody. Among RTX's side effects, immunization and anti-drug antibodies to RTX (RTX-ADA) production have been reported but their consequences are poorly described. The immunization rate against RTX in rheumatoid arthritis (RA) is 2.7–9.2% and it seems to be higher in other sAID although data is lacking.

Objectives: We aimed to evaluate the frequency, consequences and predictive factors of RTX-ADA in RA and sAID, as well as the use of an alternative B-cell targeted therapy, ofatumumab (OFA) in case of RTX-ADA.

Methods: All patients with RA or sAID treated with RTX from 2012 to 2017 in our tertiary reference centre for sAID were retrospectively studied. Patients who were tested for RTX-ADA were identified. Clinical and biological characteristics of RTX immunized patients were compared to those of non-immunized patients. For patients treated with OFA, clinical and biological efficacy was obtained before and after treatment.

Results: 199 patients were treated with RTX (RA: 124, sAID: 75 including 38 primary Sjögren's Syndrome (pSS), 15 systemic lupus erythematosus, 7 myositis, 6 overlap syndrome, 5 ANCA-associated vasculitides and 4 other sAID). Among the 62/199 (31.1%) tested for RTX-ADA, 14 were positive: 3/35 RA (8.6%) and 11/27 (40.7%) other sAID, ($p=0.005$). Among the whole RTX-treated patients, the frequency of RTX-ADA was 2.4% and 14.7% ($p=0.003$) in RA and in other sAID, respectively. Most of the immunized patients experienced delayed infusion reactions (11/14 [78.5%]). Delayed reactions were observed within the first 15 days after the infusion, and after a median 2 cycles [range; 1–2]. They were mainly rash (72.7%), fever (54.5) and/or abdominal pain (36.3%). Predictive factors of immunization were a sAID compared to RA (40.7% vs 8.6%,

$p=0.005$), and young age (50.5 vs 61.5 years, $p=0.003$). Neither hypergammaglobulinemia, rheumatoid factor, disease activity, nor associated immunosuppressive therapy were associated with RTX-ADA. Among 23 tested patients with SLE or pSS, anti-SSA antibodies tended to be more frequent in immunized patients than non immunized (9/10 (90.0%) vs. 8/13 (61.5%), $p=0.18$). Three pSS patients immunized against RTX were treated with OFA because of associated cryoglobulinemic vasculitis or MALT lymphoma. All 3 experienced complete remission of their disease. Relapse occurred in 2 patients, one with MALT lymphoma after 14 months, one with cryoglobulinemic vasculitis after 10 months and were retreated successfully with OFA. No adverse events were reported.

Conclusion: Our results show that immunization against RTX is more frequent in other sAID than in RA. Testing for ADA must be performed in patients with infusion reactions. Patients immunized to RTX might be treated efficiently with OFA, which should be further evaluated in sAID.

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AB0463 BELIMUMAB IV EFFECT IN GLUCOCORTICOID TREATMENT IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS

Marta De la Rubia Navarro¹, Susana Cerdá Checa², Jose Ivorra Cortés^{1,2}, Elena Grau García¹, Cristina Alcañiz Escandell¹, Inmaculada Chalmeta Verdejo¹, Jorge Juan Frago-Gil¹, Roxana Gonzalez Mazario¹, Luis Gonzalez Puig¹, Isabel Martínez Cordellat¹, Rosa Neguerol Albuixech¹, Jose Eloy Oller Rodríguez¹, Francisco Miguel Ortiz Sanjuan¹, Cristóbal Páez Perales¹, Elvira Vicens Bernabeu¹, Carmen Nájera Herranz¹, Inés Cánovas Olmos¹, Jose Andrés Román Ivorra^{1,2}. ¹Rheumatology Department. HUP La Fe, Valencia, Spain; ²Medical School. UCV, Valencia, Spain

Background: Systemic lupus erythematosus (SLE) is an autoimmune chronic disease produced by aberrant immunological response that consequently, causes a widespread organic damage. Treatment leads to regulating this disrupted immunological response. As a result, in 2011 Belimumab was approved for adults patients diagnosed with SLE, what is a monoclonal human antibody whose target is a B-lymphocyte stimulator (BLyS), a protein involved in the disease pathogeny.

Objectives: To evaluate the glucocorticosteroid dose variation in adult patients with systemic lupus erythematosus during Belimumab IV treatment.

Methods: Retrospective, observational study that includes patients diagnosed with SLE according to SLICC 2012 criteria, who are treated with Belimumab IV. Treatment has been administered as an initial dose: 10 mg/kg every 14 days and then, a maintenance dose: 10 mg/kg every 28 days. Data from serological profile, clinical manifestations at diagnoses and at the onset of treatment, existence of comorbidities or other diseases, concomitant therapy directed to the main disease or to the complications that came from the disease, non administration causes and definitive treatment discontinuation were collected from July 2012 until December 2018.

Results: A total of 19 patients (94.74% women) with 28 years old (Q1 14, Q3 31.82) as a median age at diagnosis and 11 (Q1 6.5, Q3 20) years since disease diagnosis were included. Follow up mean was 29 (Q1 7.5, Q3 37) months.

Regarding to concomitant therapies, 5 patients (26.31%) were treated with Azathioprine and 3 patients with Methotrexate (15.79%). At the onset of biological therapy, 17 patients were treated with glucocorticoids, at a dose of 10 mg (Q1 9.38, Q3 10.63). At the end of follow up, 18 patients (94.73%) were treated with corticoid and the mean dose was 8.75 mg (Q1 8.75, Q3 8.75).

Table 1. Characteristics of patients on bela.

ID	Age at SLE dx	Race	LN class	Time to KT (yrs)	Type KT	Induction	Reason for conversion	Immunosuppressive regimen before conversion
A	16	Black	IV, VI	13	DDKT	ATG	Non-adherence	TAC, MMF
B	30	Asian		2	LRKT	ATG	Mod IFTA & Arteriosclerosis	TAC, MPA, PRED
C	18	White	IV, V	23	DDKT	ATG	Cortical necrosis	CYC, MMF, PRED
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F	18	Black	V	17	DDKT	Alentuzumab	CNI side effects	TAC, MMF, PRED
G	25	White (Hispanic)	III, IV	23	DDKT	Basiliximab	TMA (biopsy)	TAC, MPA, PRED