Figure 1.

Conclusion: In patients with proliferative LN, proteinuric flares are a frequent event after induction treatment leads to CRR. Younger age, arterial hypertension, use of antihypertensive drugs and use of azathioprine as maintenance therapy were risk factors for LN proteinuric flare in this cohort.

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SAT0185

PREDICTORS OF POOR RENAL OUTCOME IN PATIENTS WITH PROLIFERATIVE LUPUS NEPHRITIS: A 36-MONTHS COHORT STUDY

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Background: The EULAR/ERA-EDTA recommendations for lupus nephritis (LN) state that renal response should be achieved within 12 months following induction therapy. However, there is an unmet need for early predictors of renal outcome in order to adjust the immunosuppression regimen and optimize the renal outcome.

Objectives: To identify predictors of poor renal outcome at baseline, 3 months and 6 months after starting induction therapy.

Methods: Retrospective cohort study over 36 months including patients with Systemic lupus erythematosus (SLE) fulfilling the ACR'97 and/or the SLICC'12 classification criteria and with biopsy-proven proliferative LN (class III/IV), enrolled in the CHUC Lupus Cohort from 1999 to 2018. Poor renal outcome was defined as longer time to complete renal response (CRR), characterized by proteinuria <0.5g/day and normal renal function, according to EULAR/ERA-EDTA criteria. Clinical-analytical characteristics at baseline, 3 months and 6 months after starting induction treatment were compared using survival analysis for time-to-CRR. Variables with $p < 0.25$ on univariate analysis using Log-Rank tests were further evaluated as predictors applying multivariate Cox proportional hazards regression models (Backward Stepwise method, Wald-based) with estimation of hazard ratios (HR) and 95% confidence intervals (95%CI).

Results: 56 patients were included (76.8% female, age at LN diagnosis 30.0 ± 13.2 years). Over the follow-up, 51 patients (91.1%) achieved CRR, within a median time of 6.0 months. In multivariate analysis, predictors of poor renal outcome were proteinuria $>2\text{g/day}$ at baseline (HR 1.98; 95%CI 1.04-3.77; $p=0.037$) and induction therapy with pulse cyclophosphamide (CYC), as compared to mycophenolate mofetil (MMF) (HR=2.05; 95%CI 1.07-3.94; $p=0.030$) (Figure 1). Diabetes mellitus (HR=6.0; 95%CI 1.24-29.07; $p=0.026$) and negative anti-RNP antibody (HR 3.17; 95%CI 1.27-7.93; $p=0.013$) at baseline predicted poor renal outcome at 3 months. At this timepoint, level of proteinuria and clearance rate were not predictive of renal response. At 6 months, no predictors of LN outcome were found for those patients that did not achieve CRR up to this timepoint. Use of glucocorticoid pulses and/or antihypertensive drugs did not predict LN outcome.

Figure 1.

Conclusion: In this SLE cohort, most patients with proliferative LN achieved CRR. Proteinuria above 2g/day at baseline and diabetes mellitus were predictors of poor renal outcome, while positive anti-RNP was protective. Induction treatment with CYC was associated with poorer outcome as compared with MMF. Given the retrospective non-randomized nature of this study, caution is needed when drawing conclusions regarding both treatments efficacy.

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SAT0186

DEVELOPING PREDICTORS OF GLOBAL BILAG TREATMENT RESPONSE IN PATIENTS WITH LUPUS NEPHRITIS: MORE LESSONS FROM THE ASPREVA LUPUS MANAGEMENT STUDY GROUP (ALMS) DATA

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Background: Lupus Nephritis (LN) occurs in up to 60% of patients with SLE and is often associated with other organ involvement, morbidity and mortality. Treatment response and clinical improvement rates are limited with conventional therapy. Little is known about clinical predictors of response in SLE overall or in LN.

The ALMS induction trial compared mycophenolate mofetil (MMF) to IV cyclophosphamide (CYC) as induction for LN. MMF was deemed non-superior. The ALMS maintenance trial randomised responders to induction treatment at 6 months to MMF or Azathioprine, with MMF superior during follow-up.

Objectives: To identify predictors of overall clinical response at 6 and 12 months, in a cohort of SLE patients with LN.

Methods: Using the ALMS trial cohort, we analysed predictors of response in all the patients as a single cohort. 'Classic' BILAG scores were used to assess organ responses over time. Endpoints analysed were:

1) Improvement: defined as reduction in BILAG score to $\leq$ one BILAG B and no new BILAG organ domains involved, no increase in steroids from baseline and no increase in SLEDAI from baseline.

2) Major Clinical Response (MCR): defined as reduction in BILAG score to BILAG C in all domains, a reduction in steroid dose to $\leq 7.5\text{mg}$ daily and a SLEDAI score ≤ 4 . Potential predictors examined included baseline demographics, medication, disease activity (BILAG, SLEDAI), SLICC/ACR damage index (SDI) and serology. Univariate logistic regressions were used to provide odds ratios of predictors. Multivariate logistic regressions with LASSO and cross-validation in randomly split samples were utilised to build prediction models. Predictors were ranked by the percentage of times they were selected by LASSO.

Results: 370 patients enrolled in the ALMS induction trial. 227 patients were randomised at 6 months to maintenance. 313(84.59%) patients were female. 147(39.72%) patients were Caucasian. The mean age was 31.9 years.