

REM achievement (OR 1.08,  $p$  0.02/OR 1.09,  $p$  0.01), a higher SDI score (OR 1.82,  $p$  0.02), and the protective effect of hydroxychloroquine use (OR 0.26,  $p$  0.02).

**Conclusions** In our cohort, higher SLEDAI-2K scores and the occurrence of LN flares were associated with a lower probability of response to therapy. A higher SDI score and a prolonged time to achieve REM/LLDAS serve as potential indicators of kidney function deterioration.

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### RTUXIMAB THERAPY IN LUPUS NEPHRITIS RESISTANT TO CONVENTIONAL THERAPY – A SINGLE CENTER EXPERIENCE (CASE SERIES)

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10.1136/lupus-2024-el.140

**Objective** Lupus nephritis (LN) is challenging, especially in treatment-resistant cases. This retrospective study evaluates rituximab's effectiveness in LN patients at our clinic.

**Methods** We retrospectively analyzed LN patients who received rituximab at our clinic from 2010 to 2022. We measured key parameters before and after rituximab, including creatinine clearance, serum creatinine, 24-hour proteinuria, and SLE-DAI-2K. Our primary goals were reducing prednisolone to  $\leq 5$  mg and proteinuria to  $\leq 500$  mg, while also examining rituximab's side effects.

**Results** In this study, 47 patients (34 females, 13 males) with active lupus nephritis received rituximab. Their average disease duration was 10.44 years  $\pm$  6, confirmed by renal biopsy. They underwent an average of 4.1  $\pm$  3.68 rituximab courses. Initially, high-dose steroids were administered, along with prior treatments such as cyclophosphamide ( $n=35$ ), mycophenolate mofetil ( $n=31$ ), azathioprine ( $n=6$ ), and cyclosporine ( $n=2$ ). The pre-treatment proteinuria level significantly decreased from 3599.5  $\pm$  2485.3 mg/day to a median of 747 (396, 1500) mg/day ( $p=0.00$ ) after rituximab. Serum creatinine levels dropped from 0.94  $\pm$  0.59 to 0.78 (0.6, 1.13) ( $p=0.031$ ), and mean serum creatinine clearance increased from 102.01  $\pm$  43.2 to 109.1  $\pm$  51.3 ( $p=0.28$ ). Mean SLE-DAI-2K scores reduced from 16.3  $\pm$  6.2 to 7.2  $\pm$  4.8 ( $p=0.00$ ). The initial steroid dose decreased from 24.13  $\pm$  18.47 mg/day to 7.5  $\pm$  5.8 mg/day ( $p=0.0$ ) at the last rituximab course. Three patients developed end-stage renal disease. For primary endpoints, 53.1% achieved a prednisolone dose of  $\leq 5$ mg, and 36.1% achieved 24-hour proteinuria  $\leq 500$  mg. Both criteria were met by 25.5% of patients. Adverse events included serum reactions in two patients, pneumonia in three, and herpes zoster in three. Three patients developed hypogammaglobulinemia, successfully treated with intravenous immunoglobulin. Importantly, no patients succumbed to lupus nephritis.

**Conclusion** For patients resistant to conventional treatments, rituximab appears to be a viable alternative in managing lupus nephritis. In our single-center analysis, class 3 lupus nephritis patients derived the most benefit from rituximab. Overall, the side effects were manageable, making rituximab a valuable option for reducing steroid dependence and achieving favorable clinical outcomes in these patients.

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### COMPARISON OF A VOCLOSPORIN-BASED, TRIPLE IMMUNOTHERAPY REGIMEN TO HIGH-DOSE GLUCOCORTICOID-BASED IMMUNOSUPPRESSIVE THERAPY: A PROPENSITY ANALYSIS OF THE AURA-LV PLUS AURORA 1 STUDIES AND ALMS

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10.1136/lupus-2024-el.141

**Objective** Early reduction in proteinuria after initial treatment has been associated with improved long-term kidney outcomes in lupus nephritis (LN). The addition of voclosporin, a second generation calcineurin inhibitor, to MMF and low-dose glucocorticoids (GCs) led to greater reductions in proteinuria compared to conventional therapy in the AURA-LV and AURORA 1 studies with an acceptable safety profile. Using propensity-matched participants from the voclosporin clinical trials and ALMS, we tested the hypothesis that a voclosporin-based, triple immunosuppressive regimen results in improved safety without compromising efficacy.

**Methods** In AURA-LV and AURORA 1, voclosporin 23.7 mg BID was combined with MMF (2 g/day) and oral GCs (25 mg/day tapered to 2.5 mg/day by Week 16). In ALMS, MMF (3 g/day) or intravenous cyclophosphamide (IVC; 0.5 to 1.0 g/m<sup>2</sup>/month x 6) was added to oral GCs initiated at a maximum dose of 60 mg/day, tapered every 2 weeks to 10 mg/day. Propensity score methodology was used to generate groups of matched participants (ALMS vs. AURA-LV/AURORA 1) based on demographic and disease characteristics. Safety and efficacy were assessed at 3 and 6 months.

**Results** A total of 179 matched pairs were identified. As expected, cumulative GC exposure was 2-fold higher in ALMS at 3 and 6 months. The incidence of adverse events (AEs) was higher in IVC- and high-dose MMF-treated participants (table 1), although more voclosporin-treated participants reported AEs of GFR decrease and hypertension; the incidence of serious AEs was similar with all treatments. At 6 months, the proportion of participants achieving  $>50\%$  UPCR reduction from baseline was significantly greater in the voclosporin arm ( $p=0.005$ ).

**Conclusion** A voclosporin-based triple immunosuppressive regimen (voclosporin, MMF, and low-dose GCs) has a better overall safety profile than double-therapy regimens, with specific AEs attributable to higher-dose GCs, higher-dose MMF and IVC in the latter. Triple therapy is also superior in achieving early proteinuria milestones. These data provide further support for use of combination therapy as initial treatment in patients with active LN and to minimizing patient exposure to GCs, as proposed by the 2023 EULAR guidelines.

**Acknowledgement** This study was funded by Aurinia Pharmaceuticals Inc.

In AURA-LV and AURORA 1, voclosporin 23.7 mg BID was combined with MMF (2 g/day) and oral GCs (25 mg/day tapered to 2.5 mg/day by Week 16). In ALMS, MMF (3 g/day) or intravenous cyclophosphamide (IVC; 0.5 to 1.0 g/m<sup>2</sup>/month x 6) was added to oral GCs initiated at a maximum dose of 60 mg/day, tapered every 2 weeks to 10 mg/day. Propensity score methodology was used to generate two groups of matched patients ( $n=179$ ) from the ALMS (IVC and