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Rituximab add-on therapy for individuals with refractory lupus nephritis not responded to other drugs therapy

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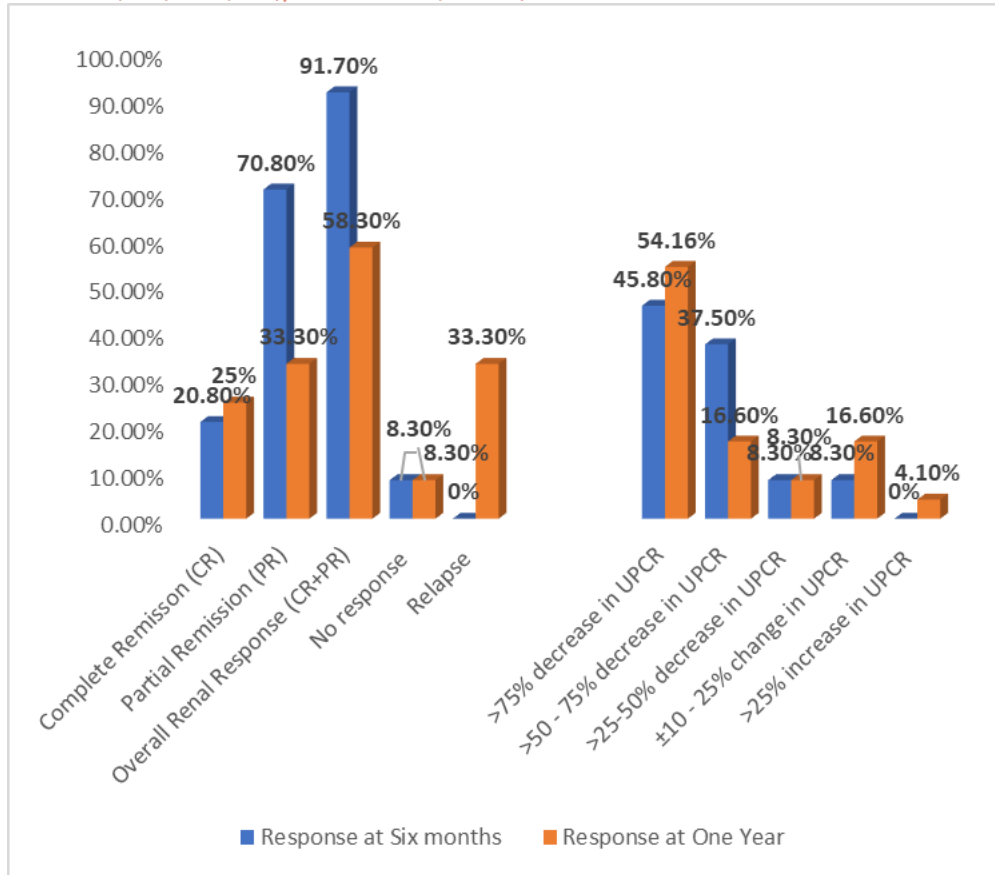
Objectives : Lupus nephritis(LN) carries a high risk of poor prognosis, particularly in those who are resistant to standard treatments. To overcome their insufficient response, newer modalities of therapy are required. The study aimed to evaluate the efficacy and safety of Rituximab(RTX) as induction therapy followed by maintenance therapy in patients with resistant LN.

Methods : Total of 24 patients with resistant LN, either failing initial induction therapy or experiencing severe relapse after remission, were included. RTX was administered as add-on therapy with immunosuppressant medications. Primary outcomes assessed based on KDIGO criteria.

Results : The median age of patients was 28 years (IQR 24.5-42), with a male-to-female ratio of 11:1. All patients had active LN, with 91.3% exhibiting proliferative LN. Baseline creatinine was 1.075 mg% (IQR 0.7-1.38), and the mean urine protein-to-creatinine ratio (UPCR) was 4.9 (IQR 2.8-6.65). Among patients receiving RTX, 66.6% had failed initial induction therapy, while 33.3% experienced severe relapse during maintenance therapy. RTX yielded a favourable renal response at six months, with 91.7% of patients responding [20.8% complete response(CR), 70.8% partial response(PR)]. At 12 months, 58.3% maintained a renal response (25% CR, 33.3% PR). Approximately one-third of patients relapsed within a year. Fourteen patients (58.3%) continued with RTX as maintenance therapy, using two different treatment regimens. At six months, Regimen-1 (500 mg every six months) resulted in a partial response in 43% and a relapse in 57%. Regimen 2 (1 g dose per year) achieved a complete response in 28.5% and a partial response in 71.5%, with no relapses reported. At median follow-up of 29 months, adverse renal outcomes occurred in 29.16% of patients with progression to advanced CKD or ESRD. The infection prevalence was 16%.

Conclusions : RTX demonstrated efficacy and safety as induction therapy for resistant LN. But the response diminished after one year, emphasizing the necessity for optimal maintenance therapy.

Picture1.png



Picture1.png

Regime 1:	Six months		12 months		18 months		24 months		30 months
Rituximab 6 monthly 500mg	N=7	N=7	Response to RTX at six months	N=3	Response to RTX 500 mg at 12 months	N=2	Response to RTX 500 mg at 18 months	N=2	Response to RTX at 24 months
	PR - 5 CR - 2 Relapse- 0	RTX 500mg	PR - 3(43%) Relapse- 4(57%)	RTX 500 mg	PR 3(100%) Relapse 0(0%)	RTX 500 mg	PR -1 (50%) Relapse 1(50%)	RTX 500 mg	PR - 1(50%) CR - 1(50%)
Regime 2:	Six months		12 months		18 months		24 months		30 months
Rituximab 1 gm yearly	N=7		N=7	N=7	Response to RTX 1-2 gm at six months	N=5	Response to RTX 1-2 gm at 12 months	N=2	Response to RTX at 18 months
	PR - 5 CR-2 Relapse- 0		PR - 1 CR-1 Relapse- 5	RTX 1 gm	PR-5 (71.4%) CR 2 (24.8%)		PR- 2 (40%) CR- 2(40%) Relapse 1(20%)	RTX 1 gm	PR -1 (50%) CR -1 (50%)