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P387 -Single Centre Experience of Rituximab Use in Nephrotic Syndrome

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Nephrotic syndrome is a common chronic condition characterised by nephrotic range proteinuria and hypo-albuminaemia with multiple underlying aetiologies.
Current KDIGO guidelines recommend treatment with high dose steroids tapered over 6 months once remission is achieved. Long term immunosuppressive therapy including cyclophosphamide, calcineurin inhibitors and mycophenolate mofetil should be considered in those with steroid dependent or frequently relapsing disease. These therapies are associated with significant morbidity and side effects particularly in young patients. Frequent relapses also impact on education and employment, highlighting the need for better tolerated and more effective treatment.
Emerging evidence suggests that rituximab is helpful in reducing the frequency of relapse and minimising exposure to harmful high dose steroids and immunosuppressive therapy. It may also have an important role in managing patients with sub-optimal concordance.
We identified 14 patients with nephrotic syndrome treated with rituximab between January 2014 and December 2018, which included 9 patients with minimal change disease, 4 patients with focal segmental glomerular sclerosis and 1 patient with membranous nephropathy. There were 11 males and 3 females with a mean age of 27 years old (range 18 - 63 years old). Mean duration of follow up was 29 months (range 5 - 60 months).
The main indication for treatment with rituximab was steroid dependent nephrotic syndrome (12 patients), 1 patient had frequently relapsing nephrotic syndrome and 1 patient had recurrence of membranous nephropathy in their renal allograft. Each course of treatment included 2 1g doses of rituximab given 2 weeks apart and patients received between 1 to 5 courses of treatment with a mean interval of 1 year between courses. 11 patients had B lymphocyte subset monitoring and in 9 of these repeat dosing was guided according to the results.
At last follow up 10 patients were in remission; 4 of these were on concomitant steroid treatment, 3 were on concomitant tacrolimus and 3 were on no other immunosuppression. 4 patients had an initial response and relapsed; 1 was on concomitant steroid treatment, 2 were on concomitant tacrolimus and 1 on no immunosuppression at the time of relapse.
Of the 4 who relapsed, all had evidence of B cell repletion prior to relapse; 2 relapsed prior to planned administration of rituximab and 2 relapsed due to deliberate delay of rituximab administration due to infection.
Our experience demonstrates that rituximab is effective at inducing and maintaining remission in patients with challenging steroid dependent and frequently relapsing nephrotic syndrome. All patients that relapsed had replenished their B Lymphocytes, demonstrating the importance of monitoring lymphocyte subsets to guide dosing interval.
Rituximab offers a cost effective treatment option for these patients that is minimally disruptive, prolongs relapse free periods and with no recorded adverse events.