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P379 -Infective complications following Rituximab treatment – A single centre experience

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Introduction
Rituximab is increasingly used in the treatment of ANCA associated vasculitis (AAV) and other glomerulonephritidies. In our centre, rituximab use has been supervised through a dedicated immunosuppression clinic since August 2016. We retrospectively analysed infection rates following rituximab infusion and potential contributing factors

Methods
All patients receiving rituximab via the immunosuppression clinic between August 2016 to April 2018 were included. Infection events between August 2016 to October 2018 (6 -26 months following rituximab treatment) were examined retrospectively, using paper and electronic patient records. Demographics including gender, sex, and age were recorded, with IgG level and lymphocyte count at baseline and month 6. Lymphopenia was differentiated into 2 categories depending on severity; <0.5 X109/L and 0.5-1 X109/L. Rates of hospitalisation, including source of infection and length of stay was calculated using hospital discharge summaries.
Data was analysed using a variety of statistical methods, including chi square and independent samples T Test.

Results
23 patents were administered rituximab, all but 2 patients received 2x 1g doses. All patients received Pneumocystis Jiroveci pneumonia prophylaxis. Indications included AAV (74%, n=17), focal segmental glomerulosclerosis (13%, n=3), membranous nephropathy (n=1), minimal change (n=1) and 'nephrotic syndrome NOS' (n=1).
34.8% (n=8) of patients received treatment for infective complications, 6 (75%) required hospitalisation with a mean length of stay of 10.8 days. The average time to infection was 1.74 months after the first dose of rituximab. 3 patients had more than 1 infective event. All affected patients had respiratory tract infections, although an organism was only identified in 3 cases (2 influenza A, 1 parainfluenza).

Two patients died; one, 2 months following rituximab secondary to a pneumonia on a background of lung malignancy, the second as a consequence of a small cell lung cancer.
Co-morbidity with diabetes (8.7%) was not found to be an independent risk factor for infection (p=1.00). None of the patients received cyclophosphamide in the 3 months preceding rituximab, whilst four patients had received an anti-metabolite (azathioprine/ mycophenolate mofetil) in the same duration. 3 out of 4 of these patients developed an infection with 2 requiring hospitalisation.
Neither lymphopenia at baseline (p=0.18), nor the change in lymphocyte count from baseline to 6 months (p=0.31), was associated with increased infection rates.

Conclusion
34.8% of patients had an infective complication after receiving rituximab with 6 (75%) requiring hospitalisation. All infection events were of respiratory aetiology. Infection was numerically commoner in patients who had used antimetabolites in the 3 months prior to rituximab. The only significant predictor of infection was male gender whilst in contrast to some previous reports, pre-rituximab lymphocyte count and

IgG level were not associated with infection, though the small sample size limits the utility of the analysis. Knowing that all infection events were of respiratory aetiology, may facilitate clinicians to educate patients about symptom awareness and seeking prompt medical attention, which in turn may lead to a reduction in hospitalisation rates and morbidity.