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CLINICAL NEPHROLOGY, PRIMARY AND SECONDARY GLOMERULONEPHRITIS - 1

FP161 ANCA AND ANTI–GBM DOUBLE POSITIVITY: A CASE SERIES

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Introduction and Aims: Serological double positivity for both ANCA and anti-GBM antibodies is described in patients presenting with rapidly progressive glomerulonephritis (RPGN). The clinical significance of this serological pattern remains unclear, as does the prevalence, clinical features and natural history of this condition. Our aim was define the prevalence of double positivity in the Irish Rare Kidney Diseases Registry and Biobank, and to examine the clinical and histological characteristics of affected patients.
Methods: Data were collected on all patients with ANCA-associated vasculitis (AAV) and anti-GBM disease in the Irish Rare Kidney Diseases Registry. The cohort that was positive for both ANCA and anti-GBM was identified and their demographic, clinical and histological features, as well as outcomes, were recorded.
Results: Of 302 patients that were ANCA positive, 10 (3%) were also positive for anti-GBM. Of 23 patients with a circulating anti-GBM antibody, 10 (43%) were also positive for ANCA. The median age of double positive patients was 67 (range 49-81). There were 5 men. 6 of the patients were current/former smokers. 6 patients were MPO-positive, while 4 were PR3-positive. All 10 patients (100%) had renal involvement at presentation, with a median serum creatinine of 300 μmol/L (range 204-672μmol/L). 3/10 (30%) had pulmonary haemorrhage at presentation. 6/10 (60%) had a serum creatinine <500 μmol/L, none of whom required dialysis later. 3/10 (30%) required dialysis at presentation; none of these patients subsequently recovered independent renal function. The median serum creatinine at last follow-up was 275 μmol/L (range 204-600 μmol/L) in the dialysis-independent cohort. Data were available for 8/10 biopsies. 5/10 (50%) had >50% crescents on renal biopsy, 1/10 (10%) had a mixed Berden score, 1/10 (10%) had >50% sclerosis and 1/10 (10%) had a focal Berden score. 6/10 (60%) had linear IgG deposition, 4/10 (40%) had granular C3 deposition, 2/10 (20%) had linear C3 deposition and 2/10 (20%) had granular IgM deposition. 2/10 (20%) were pauci-immune. All patients were treated with induction and maintenance immunosuppression. 8/10 (80%) underwent plasmapheresis, with a median of 7 exchanges (range 5-26). 2 patients suffered leucopaenia during treatment, 3 patients had infectious complications. Other adverse events included steroid-induced diabetes, acute cardiac failure and a GI bleed. 1 patient died due to pneumocystis jiroveci pneumonia.
Conclusions: Serological double positivity is common in patients with anti-GBM disease but may be observed in a minority of ANCA-positive RPGN cases. We hypothesise that this may occur as a result of ANCA-associated basement membrane damage, leading to a secondary immune response to epitopes in Type IV collagen and other components of the basement membrane. In keeping with prior studies, patients requiring dialysis at presentation had a poor prognosis. Linear IgG deposition was the most common immunofluorescent finding on renal biopsy, indicating that these patients behave more like anti-GBM patients than pauci-immune AAV. Further studies will be required to fully elucidate the clinical and pathological nature of this disease and its prognostic significance.