Clinical outcomes of treatment of anti-neutrophil cytoplasmic antibody (ANCA)-associated vasculitis based on ANCA type.

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Abstract

OBJECTIVE:

To evaluate whether the classification of patients with anti-neutrophil cytoplasmic antibody (ANCA)-associated vasculitis (AAV) according to ANCA type (anti-proteinase 3 (PR3) or anti-myeloperoxidase (MPO) antibodies) predicts treatment response.

METHODS:

Treatment responses were assessed among patients enrolled in the Rituximab in ANCA-associated Vasculitis trial according to both AAV diagnosis (granulomatosis with polyangiitis (GPA)/microscopic polyangiitis (MPA)) and ANCA type (PR3-AAV/MPO-AAV). Complete remission (CR) was defined as disease activity score of 0 and successful completion of the prednisone taper.

RESULTS:

PR3-AAV patients treated with rituximab (RTX) achieved CR at 6 months more frequently than did those randomised to cyclophosphamide (CYC)/azathioprine (AZA) (65% vs 48%; p=0.04). The OR for CR at 6 months among PR3-AAV patients treated with RTX as opposed to CYC/AZA was 2.11 (95% CI 1.04 to 4.30) in analyses adjusted for age, sex and new-onset versus relapsing disease at baseline. PR3-AAV patients with relapsing disease achieved CR more often following RTX treatment at 6 months (OR 3.57; 95% CI 1.43 to 8.93), 12 months (OR 4.32; 95% CI 1.53 to 12.15) and 18 months (OR 3.06; 95% CI 1.05 to 8.97). No association between treatment and CR was observed in the MPO-AAV patient subset or in groups divided according to AAV diagnosis.

CONCLUSIONS:

Patients with PR3-AAV respond better to RTX than to CYC/AZA. An ANCA type-based classification may guide immunosuppression in AAV.

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