

Profile of Neuromyelitis Optica Patients Treated With Rituximab: An Initial Sample

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INTRODUCTION

Neuromyelitis optica spectrum disorders (NMOSDs) are autoimmune astrocytopathies, commonly manifesting as optic neuritis (ON) and transverse myelitis (TM), and frequently associated with IgG autoantibodies targeting aquaporin-4 (AQP4).¹ Identifying AQP4-IgG is crucial for predicting relapses, which lead to cumulative neurological deficits, necessitating early initiation of immunosuppressive therapy.² Rituximab, an anti-CD20 drug, is increasing application in patients with NMOSDs.³ However, data on Rituximab's long-term efficacy in treating these conditions remain limited.⁴

OBJECTIVE

Characterizing the clinical and epidemiological profile of anti-AQP4+ NMOSD patients treated with Rituximab.

METHODS

Retrospective analysis of 34 seropositive anti-AQP4 NMOSD patients who received at least one dose of Rituximab, previously treated with on-label medications.

RESULTS

Most patients were female (88%) and of mixed ethnicity (55%), with a mean age of 35 years at disease onset (14–67 years). Regarding initial syndromes, 13 patients presented with ON, 17 with TM, 2 with concurrent TM and ON, 1 with area postrema syndrome, and 1 with cerebral syndrome. The mean time of disease was 9.8 years (2–35). The annualized relapse rate (ARR) during rituximab treatment was 0.25. The mean initial and final Expanded Disability Status Scale (EDSS) scores were identical (4.6). No patients presented severe allergic reactions, serious infections, or malignancies.

Characteristics n(%)	Total
Gender	
Female	30 (88%)
Male	4 (12%)
Age of onset	35 ± 13,34
Skin color	
Caucasian	4 (11.7%)
Mixed race	19 (55.8%)
Black	8 (23.5%)
Unknown	3 (8.8%)
Initial clinical event	
ON	13 (38.2%)
TM	17 (50%)
Simultaneous ON and TM	2 (5.9%)
Brainstem syndrome	1 (2.9%)
Cerebral syndrome	1 (2.9%)
EDSS	
At disease onset	4.6 ± 1.85
At last visit	4.6 ± 2.2
ARR	0.25 ± 0.24

DISCUSSION

These epidemiological findings align with global data, showing a higher prevalence of non-Caucasian and female patients.⁵ Rituximab treatment was not always initiated early, as recommended by more recent studies⁶. However, the stable mean EDSS scores from baseline to follow-up suggest effective disease relapse control, regardless of the time from disease onset to rituximab initiation. The ARR observed in this study was lower than the 1.7 reported previously in untreated patients.²

CONCLUSION

This ongoing study suggests that Rituximab may effectively stabilize disability in anti-AQP4+ NMOSD patients. Establishing a profile is vital to determine better the clinical response to Rituximab.

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