

First-Line Immunotherapy Alone Versus Immunosuppression in GAD Antibody-Associated Cerebellar Ataxia: A Clinical Case Series

A.Zolin^{1,2}, L. Zuliani³, M.Zoccarato⁴

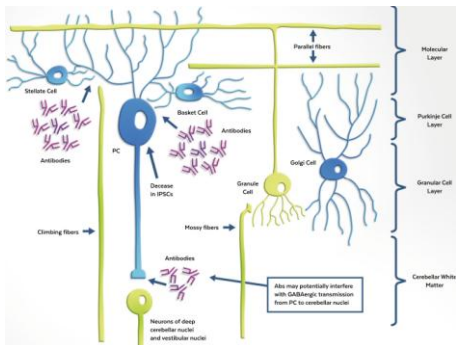
¹Department of Neurosciences, DNS, School of Medicine, University of Padua, Padua, Italy ²Multiple Sclerosis Centre of Veneto Region (Ce3MuV), Neurology Clinic, University Hospital of Padua, Padua, Italy, ³Department of Neurology, San Bartolo Hospital, Vicenza, Italy ⁴Department of Neurology, Sant'Antonio Hospital, Padua, Italy.



Introduction

Glutamic acid decarboxylase (GAD) antibodies are implicated in various neurological syndromes, notably **cerebellar ataxia**. GAD-associated ataxia typically presents in mid-to-late adulthood as a progressive pancerebellar syndrome with heterogeneous manifestations. In the absence of standardized guidelines, management is empirical, with immunotherapy showing inconsistent efficacy.

[1] Graus, et al. Nat. Rev. Neurol. 16, (2020).



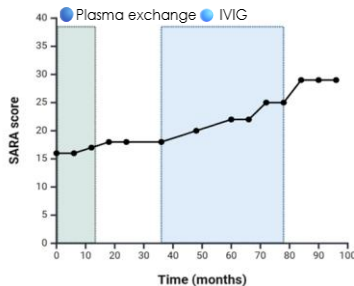
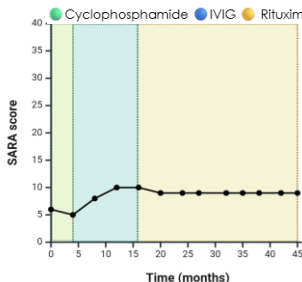
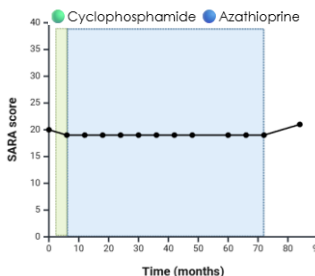
Baizabal-Carvalho, J. Et al J. Neural Transm. (2017).

Case Series

This study reports on **five patients** (four women, mean age 58.8 ± 14.4 years, mean disease duration 95 ± 74.5 months) with **GAD antibody-associated cerebellar ataxia** and high serum/CSF titers. Immunohistochemistry (in three cases) confirmed positivity. All received first-line immunotherapy (IVIg, plasma exchange, or steroids); three also received rituximab, cyclophosphamide, or both, followed by maintenance therapy. Disease progression was assessed using the **SARA scale**, with a mean baseline score of 14.75 ± 5.26 .

ID	Sex	Age at onset	Dis. duration (m)	Overlap GAD spectrum	Active neoplasm	(S) GAD kU/L	(S) IHC
Sub 1	F	74	96	No	No	35180	N.A.
Sub 2	M	57	45	No	No	>2000	N.A.
Sub 3	F	48	94	SPS	No	643289	Pos
Sub 4	F	73	24	No	Gastric NET	276500	Pos
Sub 5	F	42	216	SPS	No	75738	Pos

Patients receiving immunosuppressive therapy showed **better stabilization** and slower progression, with a mean increase in SARA score at two year of 1 ± 0.5 compared to 3 ± 2 in those who did not receive treatment.



Conclusions

The case series underscores the need for **early and intensive treatment** in GAD-associated ataxia, with **rituximab and cyclophosphamide** showing promise but requiring further validation through research.



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