Supplementary information

e-Table 1 Predictive clinical and laboratory factors at onset for a relapsing disease course

	Monophasic	Relapsing	Predictor (95% CI)	P-value
Number of children	65 (61%)	42 (39%)		
Time to relapse / last follow-up (years) [1]	3.0 (2.0-4.8) [2]	0.5 (0.4-1.0)		
Clinical follow-up (years) [1]	3.0 (2.0-4.7) [3]	5.1 (3.0-7.3) [3]		
MOG-IgG onset [1]	1280 (640-5120)	1280 (640-5120)	1.00 (1.00)	0.244
Sex				
Males	36 (66%)	19 (34%)	Reference	
Females	29 (56%)	23 (44%)	1.24 (0.65 to 2.38)	0.516
Age (years)[a]	6 (4-11)	6 (4-10)	0.98 (0.89 to 1.07)	0.627
Diagnosis at onset				
ADEM	30 (57%)	23 (43%)	Reference	
Unilateral ON	8 (40%)	12 (60%)	1.86 (0.58 to 6.79)	0.349
Bilateral ON	13 (87%)	2 (13%)	0.31 (0.06 to 1.67)	0.174
Myelitis	5 (83%)	1 (17%)	0.34 (0.05 to 2.56)	0.293
NMOSD	6 (86%)	1 (14%)	0.30 (0.04 to 2.32)	0.250
Encephalitis	3 (50%)	3 (50%)	1.42 (0.40 to 4.96)	0.587
Presentation at onset				
Monosymptomatic	18 (58%)	13 (42%)	Reference	
Polysymptomatic	47 (62%)	29 (38%)	1.06 (0.33 to 3.43)	0.918
CSF oligoclonal bands				
Negative	56 (63%)	33 (37%)	Reference	
Positive	9 (50%)	9 (50%)	1.34 (0.62 to 2.89)	0.458
CSF cells/µl [1]	23 (4-65)	33 (5-64)	1.00 (0.99 to 1.00)	0.507

The predictive role of clinical and immunological parameters at onset with the disease course at follow-up (monophasic versus relapsing) was analyzed via Cox regression analysis using the enter model with all parameters entered at the first step. CSF data were available from 107

children. [1] median with interquartile range (25th to 75th percentile), [2] censored, minimal clinical follow-up 2 years.

Abbreviations: ADEM – acute disseminated encephalomyelitis, CSF – cerebrospinal fluid, MOG – myelin oligodendrocyte glycoprotein, NMOSD – neuromyelitis optica spectrums disorder, ON – optic neuritis

e-Table 2 Comparison of demographic, clinical and laboratory findings of children with and without serological follow-up

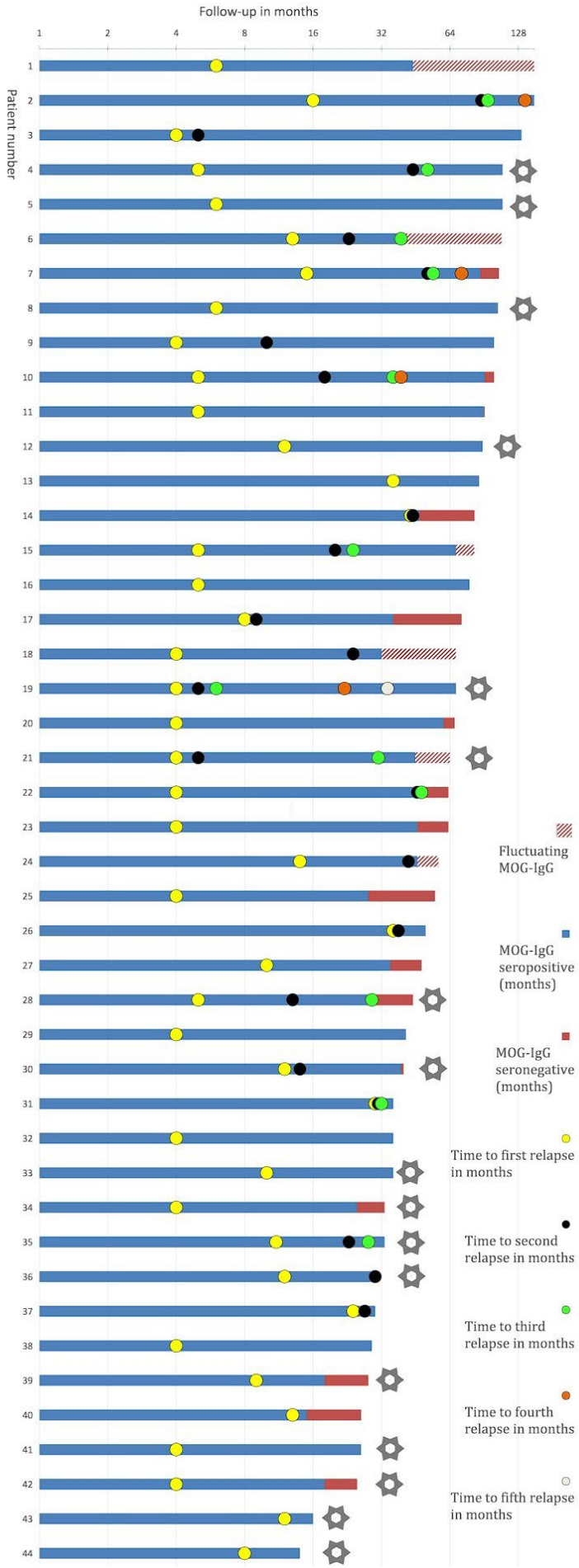
	No serological follow-up	**With serological follow-up**	**P-value**
Number of children	74 (64%)	42 (36%)	
Clinical follow-up (years) [1]	4.1 (2.5-6.3)	2.8 (2.1-5.7)	0.047 [2]
MOG-IgG onset [1]	1280 (640-5120)	1280 (640-5120)	0.974 [2]
Sex			
Males	38 (51%)	21 (50%)	0.999 [3]
Females	36 (49%)	21 (50%)	
Age (years) [1]	6 (4-10)	8 (5-12)	0.067 [2]
Diagnosis at onset			
ADEM	41 (55%)	18 (43%)	0.520 [3]
Unilateral ON	14 (19%)	7 (17%)	
Bilateral ON	7 (9%)	9 (21%)	
Myelitis	3 (4%)	3 (7%)	
NMOSD	5 (7%)	3 (7%)	
Encephalitis	4 (5%)	2 (51%)	
Presentation at onset			
Monosymptomatic	23 (31%)	10 (24%)	0.521 [2]
Polysymptomatic	51 (69%)	32 (76%)	
Disease course			
Monophasic	46 (62%)	26 (62%)	0.999 [2]
Relapsing	28 (38%)	16 (38%)	
Time to relapse / last follow-up (years) [1]	2.4 (1.1-4.0)	2.0 (0.8-2.8)	0.161 [2]

[1] median (interquartile range), statistically compared using the [2] Mann Whitney U test, [3] Fisher's exact test or [4] Chi square test.

Abbreviations: ADEM – acute disseminated encephalomyelitis, MOG – myelin oligodendrocyte glycoprotein, NMOSD – neuromyelitis optica spectrums disorder, ON – optic neuritis

e-Figure 1: Serological MOG-IgG status and relapse time of 44 children with relapsing MOGAD. 17 patients had serial MOG-IgG testing in year 1 (months 6-12) and 2 (months 18-24) and were included in our analysis assessing MOG-IgG titer dynamics and are marked with a grey star.

Each bar represents an individual patient and the duration of serological follow-up. Blue bars indicate seropositive MOG-IgG status. Red bars indicate seronegative status. Red striped bars indicate fluctuating MOG-IgG titers between seronegative and -positive titers. Colored circles indicate clinical relapses. No patient experienced a relapse after first seroconversion to MOG-IgG negative.


Follow-up in months
1
2
4
8
16
32
64
128
Patient number
1
2
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8
9
10
11
12
13
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Fluctuating MOG-IgG
MOG-IgG seropositive (months)
MOG-IgG seronegative (months)
Time to first relapse in months
Time to second relapse in months
Time to third relapse in months
Time to fourth relapse in months
Time to fifth relapse in months