

CLINICAL AND MRI FEATURES OF MYELITIS AT ONSET IN AQP4-AB & MOG-AB DISEASE

Romina Mariano, Silvia Messina, Kurun Kumar, Maria Isabel Leite, Jacqueline Palace
Nuffield Department of Clinical Neurosciences, University of Oxford

BACKGROUND & AIMS

- Both aquaporin-4 antibodies (AQP4-Ab) and myelin oligodendrocyte glycoprotein antibodies (MOG-Ab) can cause severe attacks of myelitis.
- Determining if the onset attack associates with prognosis would be useful.
- The aim of this study was to describe the onset myelitis and to analyse the clinical and MRI features for prognostic indicators.

METHODS

- 22 adult MOG-Ab positive and 33 AQP4-Ab patients, attending our specialist service, with onset myelitis and appropriate imaging were retrospectively identified.
- MRI features, clinical outcomes and CSF results were collected from our clinical database, which was populated prospectively, and from review of case notes.
- Statistical analysis was performed using R Studio v1.1.447.

RESULTS

LONG-TERM PATIENT OUTCOMES

Fig. 1 Nadir and Recovery EDSS

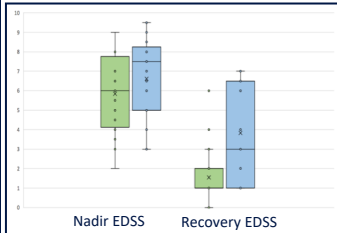


Fig. 2 Relapses

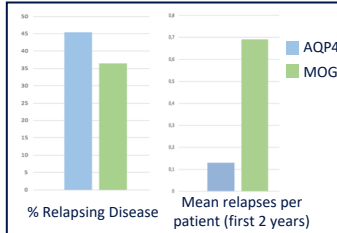


Fig. 3 Brainstem-EDSS Association in MOG

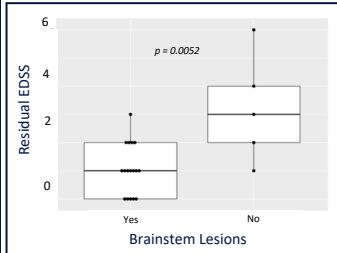
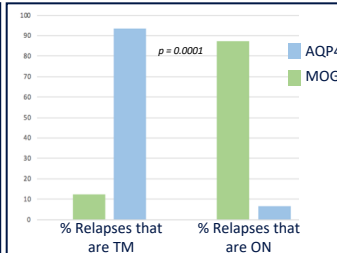


Fig. 4 Phenotype of Relapses



COHORT DESCRIPTION

Table 1 Clinical & Demographic Data

	AQP4	MOG
Total No.	33	22
Gender M:F	07:26	10:12
Age	53 +/- 16.12	37 +/- 12.04
Ethnicity		
Caucasian	19	16
Asian	6	2
Afro-caribbean	5	0
Mixed	1	1
Unknown	2	3
Disease duration (mo) +/- SD	75 +/- 52.1	39 +/- 42.4
Mean EDSS at nadir	6.6 +/- 2.1	5.8 +/- 1.9
Median EDSS at nadir (range)	7.5 (3-9.5)	6 (2-9)
Mean EDSS at recovery	3.8 +/- 2.4	1.5 +/- 1.4
Median EDSS at recovery (range)	3 (1-7)	1 (0-4)
Mean EDSS change (range)	2.8 (0.5-5)	4 (0-8)
Reached EDSS 6 (%)	13 (39)	1 (4.5)

ONSET PRESENTATION

Fig. 7 Lesion Length & Nadir EDSS

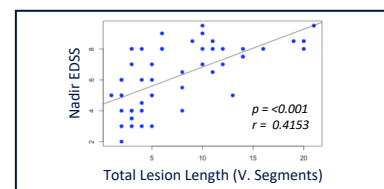


Fig. 9 More Common in MOG

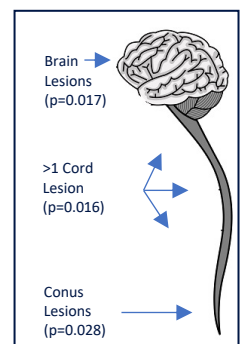


Fig. 8 Cord Lesion Length at Presentation

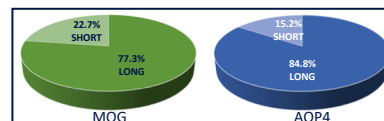
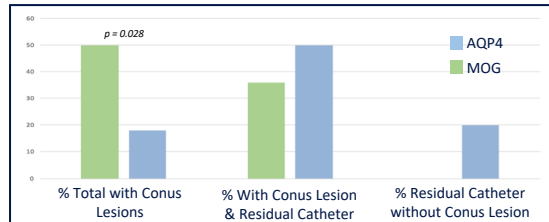


Fig. 5 Relationship Between Long-term Catheter Requirements and Conus Lesions



CONCLUSION

- MOG-Ab associated myelitis shows a better recovery of mobility, which appears to be associated with their younger onset age.
- In this MOG-Ab group, the presence of brainstem lesions appears to influence recovery.
- The increased prevalence of conus lesions accounts for those MOG-Ab patients that require long-term catheterisation.
- AQP4-Ab myelitis is more likely to be followed by myelitis and MOG-Ab disease by optic neuritis.

REFERENCES & DISCLOSURES

References: Jurynczyk, M., Messina, S., Woodhall, M., Raza, N., Everett, R., Roca-Fernandez, A., Tackley, G., Hamid, S., Sheard, A., Reynolds, G., Chandratte, S., Hemingway, C., Jacob, A., Vincent, A., Leite, M., Waters, P. and Palace, J. (2017). Clinical presentation and prognosis in MOG-antibody disease: a UK study. *Brain*, 140 (12), pp.3128-3138.

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