

Title: "The Masquerading Myelin: Unveiling MOGAD Masking as Multiple Sclerosis - A Case Report"

Esza Fatima Tariq MD¹, Sarmad Zain MBBS², Ahmad Ali Khan MBBS², Ahmad Kabir Mughal MBBS³, Choudhury Shadmani MD⁴, Jonathan Arnold MD^{1,5}

Affiliations:UPMC McKeesport¹, Nishtar Medical University², CPE Institute of Cardiology³, Indiana Regional Medical Centre⁴, University of Pittsburgh⁵

INTRODUCTION

Myelin oligodendrocyte glycoprotein Antibody disease (MOGAD) is a CNS demyelination disorder that has a presentation very similar to Multiple sclerosis (MS) and can easily be mistaken for MS, causing a diagnostic dilemma.

CASE PRESENTATION

PATIENT

- 30 year old woman
- Multiple comorbidities (Migraines, IBD, anxiety disorder)

SYMPTOMS

- Abdominal pain (sharp, radiating to back)
- Pain shoots down back on neck flexion
- Lower extremity numbness – progressed from right leg to left leg.
- Bowel and urine incontinence

IMAGING

- Thoracic MRI without contrast (increased T2 signal at T5, T9 levels), C4 and C5 levels, demyelinating longitudinal plaque
- Brain MRI unremarkable.

DIAGNOSTIC TEST

- LP demonstrating oligoclonal bands.
- Positive antibodies against MOG in serum.

DIAGNOSIS

- Initially suspected Multiple Sclerosis
- Later confirmed as MOG Antibody Disease (MOGAD).

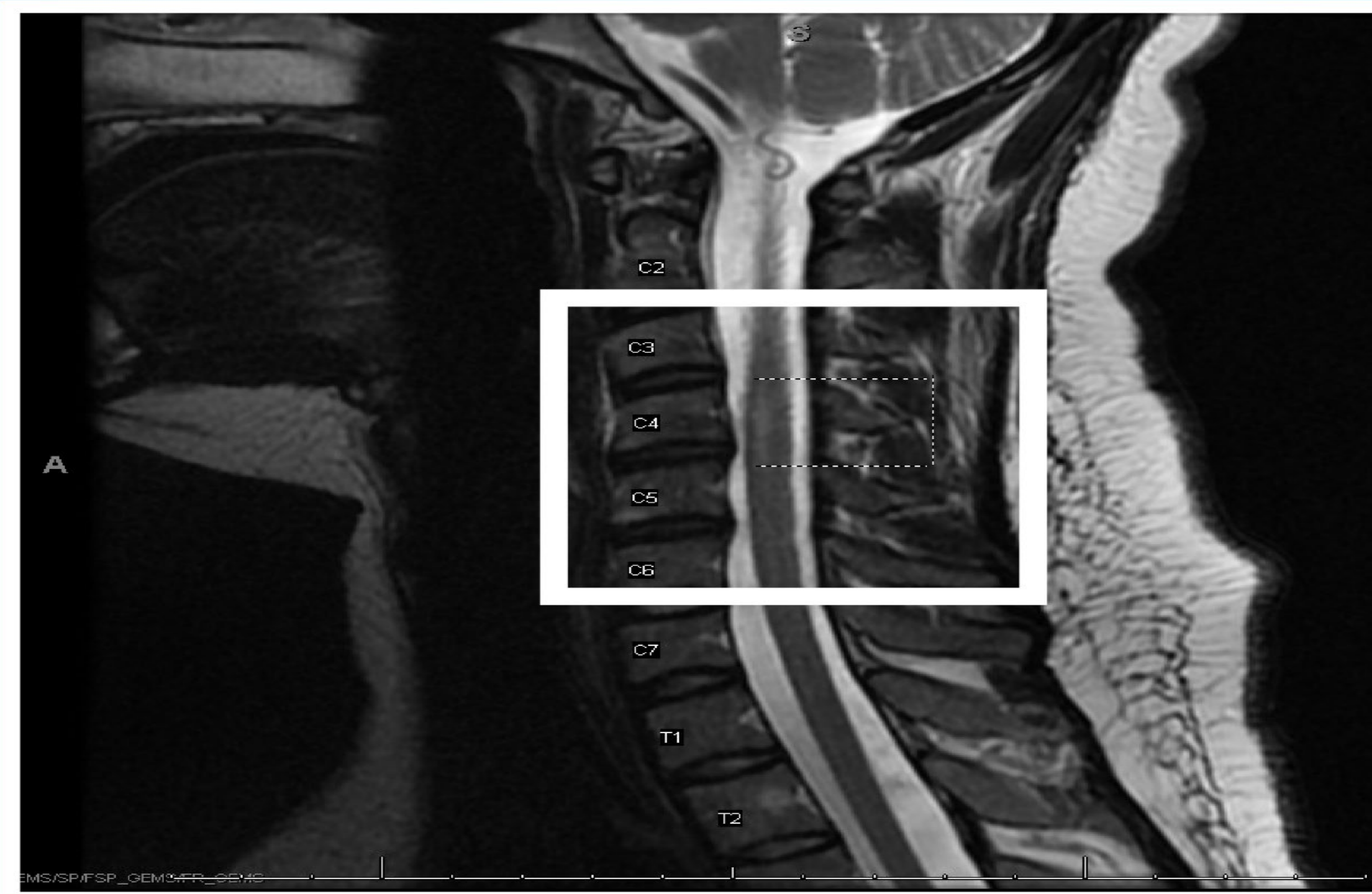
TREATMENT

- Initially treated with steroids for 5 days (no improvement)
- Subsequently treated with plasmapheresis.

CLINICAL OUTCOME

- Patient showed improvement after plasmapheresis.

PRE-TREATMENT T2 SEGMENT OF THORACIC SPINE ON MRI



Cervical spine T2 sagittal image without contrast with a T2 hyperintense lesion spanning from C4 to C5 in the left hemicord (annotated by bracket). Early multilevel cervical spine degenerative disc disease. A T2 vertebral body hemangioma is incidentally noted.

POST-TREATMENT T2 SEGMENT OF THORACIC SPINE ON MRI



Cervical spine T2 sagittal image without contrast and post-treatment now lacking the T2-hyperintensity in the left hemicord.

DISCUSSION

- MOGAD mimics MS, causing optic neuritis, transverse myelitis, or encephalitis.
- MOGAD presents with bilateral spinal lesions and positive MOG antibodies, contrasting with MS brain lesions.
- Initial treatment is similar, but MOGAD tends to be monophasic, while MS relapses and requires ongoing therapy.

CONCLUSION

- Our case underscores the critical need for prompt differentiation between MS and MOGAD due to distinct clinical features, emphasizing the importance of modified treatment strategies for each condition.
- Relapses are more common in MS and respond to DMARD unlike MOGAD which is less likely to respond to DMARD.

REFERENCES

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