



# MOGmentum

## Series #2

Let's gain

## MOGmentum

a collaborative series brought to you by The MOG Project and The Sumaira Foundation for NMO

The MOG Antibody:

The Clue That Changes Everything

- MOG Antibody Disease (MOG-AD) is diagnosed through a blood test and for that reason, the MOG antibody is considered a biomarker for the disease.
- Many other neuroimmune diseases such as Multiple Sclerosis (MS) are diagnosed through observations of symptoms and the effects on the body, or diagnosis through symptomatology.
- With the discovery of the MOG antibody, researchers are finding that many people who were thought to have one of these neuroimmune diseases, actually have MOG-AD after finding the antibody in their blood.
- The development of the MOG antibody test has opened up a new frontier for exploring the complex inter-relationship between MOGAD and neurological syndromes.

### CHARACTERIZING MOG-AD

MOG-AD can be monophasic or multiphasic.

Monophasic refers to a single demyelinating event with no additional occurrences while having tested positive for the MOG antibody. A majority of monophasic patients test negative after a period of time.

Multiphasic refers to multiple occurrences of demyelinating events while initially tested positive for the MOG antibody. Future MOG antibody tests may fluctuate in positivity.

The MOG antibody is present in the blood during observations of many central nervous system autoimmune events and therefore can be implicated in a variety of neuroimmune conditions.

A MOG Antibody Disease Diagnostic Relationship Map best describes the relationships between all disorders in which the MOG antibody is implicated.



## MOG ANTIBODY DISEASE DIAGNOSTIC RELATIONSHIPS

MONOPHASIC - Single demyelinating event with no additional occurrences while testing MOG+

- Single Event TM (Transverse Myelitis)(Clinically Isolated Syndrome could be possible differential diagnosis due to similar or overlapping symptoms).
- Single Event ON (Optic Neuritis) (Clinically Isolated Syndrome could be possible differential diagnosis due to similar or overlapping symptoms).
- Single Event CIS (Clinically isolated system of focal or multifocal demyelinating lesions without encephalopathy).
- Single Event ADEM (Acute disseminated encephalomyelitis) (Could be Differential Diagnosis with MOG-EM due to similar or overlapping symptoms).
- Single Event MOG-EM (MOG encephalomyelitis including meningo-encephalitis and brainstem encephalitis all with or without optic neuritis) (Could be differential diagnosis with ADEM due to similar or overlapping symptoms).

Multiphasic - Multiple occurrences of demyelinating events while initially testing MOG+

- MDEM (Multiphasic acute disseminated encephalomyelitis).
- ADEM/ON (Single event ADEM followed by recurrent ON).
- Recurrent MOG-EM (Recurrent MOG encephalomyelitis including meningo-encephalitis and brainstem encephalitis all with or without optic neuritis).
- MS like Pattern 2 (Multiple sclerosis-like symptoms (Pattern II is a rare subtype of MS).
- Recurrent TM (Transverse Myelitis) (Could also lead to or be a differential diagnosis of NMOSD diagnosis).
- RON (Recurrent Optic Neuritis) (Could also lead to or be a differential diagnosis of NMOSD MOG Positive or CRION MOG Positive).
- NMOSD MOG Positive (Neuromyelitis optica spectrum disorder with positive antibodies for myelin oligodendrocyte glycoprotein).
- CRION MOG Positive (Chronic recurrent inflammatory optic neuropathy with positive antibodies for myelin oligodendrocyte glycoprotein).

What if you have a SECOND ATTACK?

- A diagnosis given after a single attack may not be a patient's final diagnosis.
- A second attack can change their diagnosis.
- A MOG Antibody Disease Linked Diagnosis Progression Map best describes how a diagnosis can progress to a new diagnosis when a patient has more than one attack.



## MOG ANTIBODY DISEASE LINKED DIAGNOSIS PROGRESSION: MONOPHASIC TO MULTIPHASIC

Monophasic is a single demyelinating event with no additional occurrences while testing positive for MOG antibodies.

Multiphasic is when a patient has multiple occurrences of demyelinating events while initially testing positive for MOG antibodies.

- Monophasic MOG-EM (Single event MOG encephalomyelitis including meningo-encephalitis and brainstem encephalitis all with or without optic neuritis) if second demyelinating event occurs, MOG-EM can lead to a diagnosis of one of these multiphasic categories:
  - Recurrent MOG-EM or
  - As a differential diagnosis of NMOSD MOG positive if NMOSD criteria is met.
- Monophasic ADEM (Single event Acute disseminated encephalomyelitis) if second demyelinating event occurs, ADEM can lead to a diagnosis of one of these multiphasic categories:
  - MDEM (Multiphasic acute disseminated encephalomyelitis) or
  - ADEM/ON (Single event ADEM followed by recurrent ON) or
  - As a differential diagnosis of NMOSD MOG positive if NMOSD criteria is met.
- Monophasic ON (Single event Optic Neuritis) if second demyelinating event occurs, ON can lead to a diagnosis of one of these multiphasic categories:
  - RON (Recurrent Optic Neuritis) or
  - NMOSD MOG Positive (Neuromyelitis optica spectrum disorder with positive antibodies for myelin oligodendrocyte glycoprotein) or
  - CRION MOG Positive (Chronic recurrent inflammatory optic neuropathy with positive antibodies for myelin oligodendrocyte glycoprotein) or
  - MS like symptoms - Multiple sclerosis-like symptoms (Pattern II is a rare subtype of MS).
- Monophasic TM (Single event Transverse Myelitis) if second demyelinating event occurs, TM can lead to a diagnosis of one of these multiphasic categories:
  - NMOSD MOG Positive (Neuromyelitis optica spectrum disorder with positive antibodies for myelin oligodendrocyte glycoprotein) or
  - MS like symptoms - Multiple sclerosis-like symptoms (Pattern II is a rare subtype of MS).
- Monophasic CIS (Single event Clinically Isolated Syndrome) if second demyelinating event occurs, CIS can lead to a diagnosis of one of these multiphasic categories:
  - NMOSD MOG Positive (Neuromyelitis optica spectrum disorder with positive antibodies for myelin oligodendrocyte glycoprotein) or
  - MS like symptoms - Multiple sclerosis-like symptoms (Pattern II is a rare subtype of MS).



## FINAL THOUGHTS

- The medical community is learning about this disease in real time.
- It is up to us to advocate for ourselves and our loved ones to forge the definition of this disease so that diagnosis can be prompt and accurate.
- If you have one of these neurological syndromes, ask your doctor whether you should be tested for the MOG Antibody.

This series is brought to you by

The MOG PROJECT

And

The Sumaira Foundation for NMO

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