

Distinguishing Typical and Atypical CIDP From Other Demyelinating Neuropathies

Todd Levine, MD

Pattern Recognition of Neuropathic Disorders

- Symmetric proximal and distal weakness with sensory loss and decreased reflexes
 - Consider GBS/CIDP
 - But what if there is progressive weakness that is asymmetric...or only in arms...or only distal
 - These too can be acquired demyelinating neuropathies that may be responsive to therapy

Clinical Features to Differentiate Typical CIDP and Atypical Variants vs Other Demyelinating Polyneuropathies

Features	CIDP ^{1,2}	A-CIDP (variant) ¹⁻⁴	DADS no MAG (variant)	MADSAM (variant) ¹	MMN ¹
Weakness	<ul style="list-style-type: none"> • Symmetric • Proximal + distal • ≥8 weeks from onset to nadir 	<ul style="list-style-type: none"> • Symmetric • Distal > proximal • ≤4-8 weeks from onset to nadir 	<ul style="list-style-type: none"> • Symmetric • Distal only • Mild or none 	<ul style="list-style-type: none"> • Asymmetric • Distal > proximal • Upper limbs > lower limbs 	<ul style="list-style-type: none"> • Asymmetric • Distal > proximal • Upper limbs > lower limbs
Sensory deficits	<ul style="list-style-type: none"> • Yes • Symmetric 	<ul style="list-style-type: none"> • Yes • Symmetric 	<ul style="list-style-type: none"> • Yes • Symmetric 	<ul style="list-style-type: none"> • Yes • Multifocal 	<ul style="list-style-type: none"> • No
Reflexes	<ul style="list-style-type: none"> • Reduced or absent symmetrically 	<ul style="list-style-type: none"> • Reduced or absent symmetrically 	<ul style="list-style-type: none"> • Reduced or absent symmetrically 	<ul style="list-style-type: none"> • Reduced or absent (multifocal or diffuse) 	<ul style="list-style-type: none"> • Reduced or absent (multifocal or diffuse)

A-CIDP = acute-onset chronic inflammatory demyelinating polyneuropathy; DADS no MAG, distal acquired demyelinating symmetrical neuropathy without myelin-associated glycoprotein; MADSAM = multifocal acquired demyelinating sensory and motor neuropathy; MMN = multifocal motor neuropathy.

1. Dimachkie MM, et al. *Curr Treat Options Neurol*. 2013;15(3):350-366. 2. Ruts L, et al. *Neurology*. 2010;74(21):1680-1686. 3. McCombe PA, et al. *Brain*. 1987;110(pt 6):1617-1630. 4. Dionne A, et al. *Muscle Nerve*. 2010;41(2):202-207.

Electrophysiologic Findings to Differentiate Typical CIDP and Atypical Variants vs Other Demyelinating Polyneuropathies

Findings	CIDP ¹	A-CIDP (variant) ^{1,2}	DADS no MAG (variant)	MADSAM (variant) ¹	MMN ¹
Abnormal CMAPs: demyelinating features	<ul style="list-style-type: none"> Usually symmetric 	<ul style="list-style-type: none"> Usually symmetric 	<ul style="list-style-type: none"> Usually symmetric Prolonged distal latencies 	<ul style="list-style-type: none"> Asymmetric (multifocal) 	<ul style="list-style-type: none"> Asymmetric (multifocal)
Conduction block	<ul style="list-style-type: none"> Frequent 	<ul style="list-style-type: none"> Frequent 	<ul style="list-style-type: none"> Uncommon 	<ul style="list-style-type: none"> Frequent 	<ul style="list-style-type: none"> Frequent
Abnormal SNAPs	<ul style="list-style-type: none"> Usually symmetric 	<ul style="list-style-type: none"> Usually symmetric 	<ul style="list-style-type: none"> Usually symmetric 	<ul style="list-style-type: none"> Asymmetric (multifocal) 	<ul style="list-style-type: none"> SNAPs are normal

A-CIDP = acute-onset chronic inflammatory demyelinating polyneuropathy; DADS no MAG, distal acquired demyelinating symmetrical neuropathy without myelin-associated glycoprotein; MADSAM = multifocal acquired demyelinating sensory and motor neuropathy; MMN = multifocal motor neuropathy.

1. Dimachkie MM, et al. *Curr Treat Options Neurol.* 2013;15(3):350-366. 2. Ruts L, et al. *Neurology.* 2010;74(21):1680-1686.

Pattern Recognition of Neuropathic Disorders

- **Asymmetric Distal Weakness Without Sensory Loss**

Consider:

A. With upper neuron findings consider

1. Motor neuron disease/ALS
2. If only LMN disease → PLS

B. Without upper motor neuron findings consider

1. Progressive muscular atrophy
 - a. Brachial amyotrophic diplegia (BAD)
 - b. Leg amyotrophic diplegia (LAD)
2. Multifocal motor neuropathy

Distal Acquired Demyelinating Symmetrical Neuropathy (DADS) no MAG (Variant of CIDP)

- Subacute
- Not truly length dependent
- Conduction block, slowing in motor nerves, but without motor signs
- Areflexia
- Responsive to first-line therapies

Distinguishing Typical CIDP and DADS no MAG (Variant of CIDP) from MAG Neuropathy

- Predominant sensory loss
- Ataxia is often out of proportion to small fiber symptoms
- Tremor is a common associated symptom
- Weakness is distal at ankles and toes if at all
- IgM monoclonal protein
- 50% of patients will have anti-MAG antibodies

MADSAM (Variant of CIDP)

- Motor and Sensory: MADSAM
 - MADSAM = multifocal acquired demyelinating sensory and motor neuropathy
 - Also called Lewis-Sumner syndrome

MADSAM (Variant of CIDP), cont.

- Sensory and motor
- Hands
- Individual nerves
- Stepwise

MADSAM (Variant of CIDP), cont.

- Focal conduction abnormalities
- CSF elevated in 82% vs MMN in 9%
- Responds to first-line treatment

Distinguishing MADSAM (Variant of CIDP) From Multifocal Motor Neuropathy

- Motor only
- Main differential is ALS
- Usually hands
- Stepwise
 - NOT PROGRESSIVE

Laboratory Evaluation of Multifocal Motor Neuropathy

- Focal conduction block
- CSF usually normal
- 50% with IgM GM1 Ab



Katz J, et al. *Neurology*. 1997;48:700-707.

Hahn AF, et al. *Peripher Nerve Syst*. 2013;18(4):321-330.

EFNS/PNS Guidelines for CIDP: We Must Use Clinical and Electrodiagnostic Criteria

