Distinguishing Typical and Atypical CIDP From Other Demyelinating Neuropathies

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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

Dimachkie MM, et al. *Curr Treat Options Neurol.* 2013;15(3):350-366.

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	• Symmetric • Proximal + distal • ≥8 weeks from onset to nadir	• Symmetric • Distal > proximal • ≤4-8 weeks from onset to nadir	• Symmetric • Distal only • Mild or none	• Asymmetric • Distal > proximal • Upper limbs > lower limbs	• Asymmetric • Distal > proximal • Upper limbs > lower limbs
Sensory deficits	• Yes • Symmetric	• Yes • Symmetric	• Yes • Symmetric	• Yes • Multifocal	• No
Reflexes	• Reduced or absent symmetrically	• Reduced or absent symmetrically	• Reduced or absent symmetrically	• Reduced or absent (multifocal or diffuse)	• 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	• Usually symmetric	• Usually symmetric	• Usually symmetric • Prolonged distal latencies	• Asymmetric (multifocal)	• Asymmetric (multifocal)
Conduction block	• Frequent	• Frequent	• Uncommon	• Frequent	• Frequent
Abnormal SNAPs	• Usually symmetric	• Usually symmetric	• Usually symmetric	• Asymmetric (multifocal)	• SNAPs are normal

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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 $\rightarrow$ 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

Katz J, et al. *Neurology* 2000;54:615-620.

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

Dimachkie MM, et al. *Curr Treat Options Neurol.* 2013;15(3):350-366.

MADSAM (Variant of CIDP)

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

Lewis RA. *Muscle Nerve*. 1999 Dec;22(12):1738-9.

MADSAM (Variant of CIDP), cont.

- Sensory and motor
- Hands
- Individual nerves
- Stepwise

Saperstein DS, et al. *Muscle Nerve.* 1999;22:560-566.

MADSAM (Variant of CIDP), cont.

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

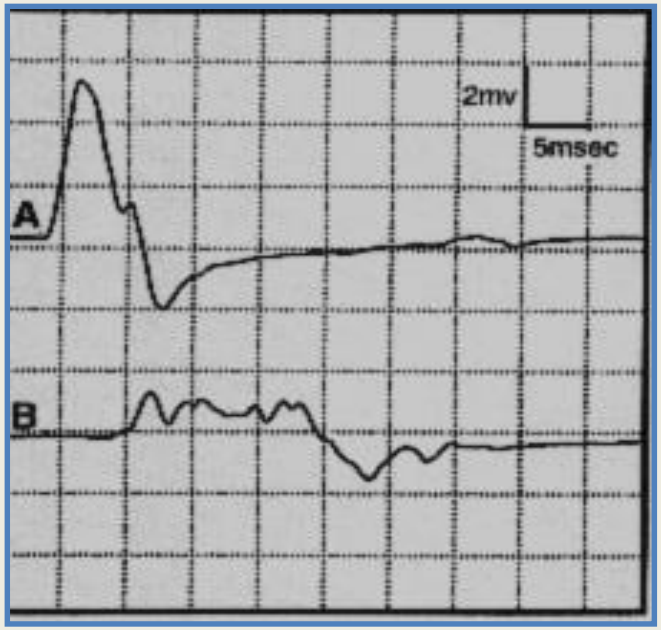
Saperstein DS, et al. *Muscle Nerve*. 1999;22(5):560-6.

Distinguishing MADSAM (Variant of CIDP) From Multifocal Motor Neuropathy

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

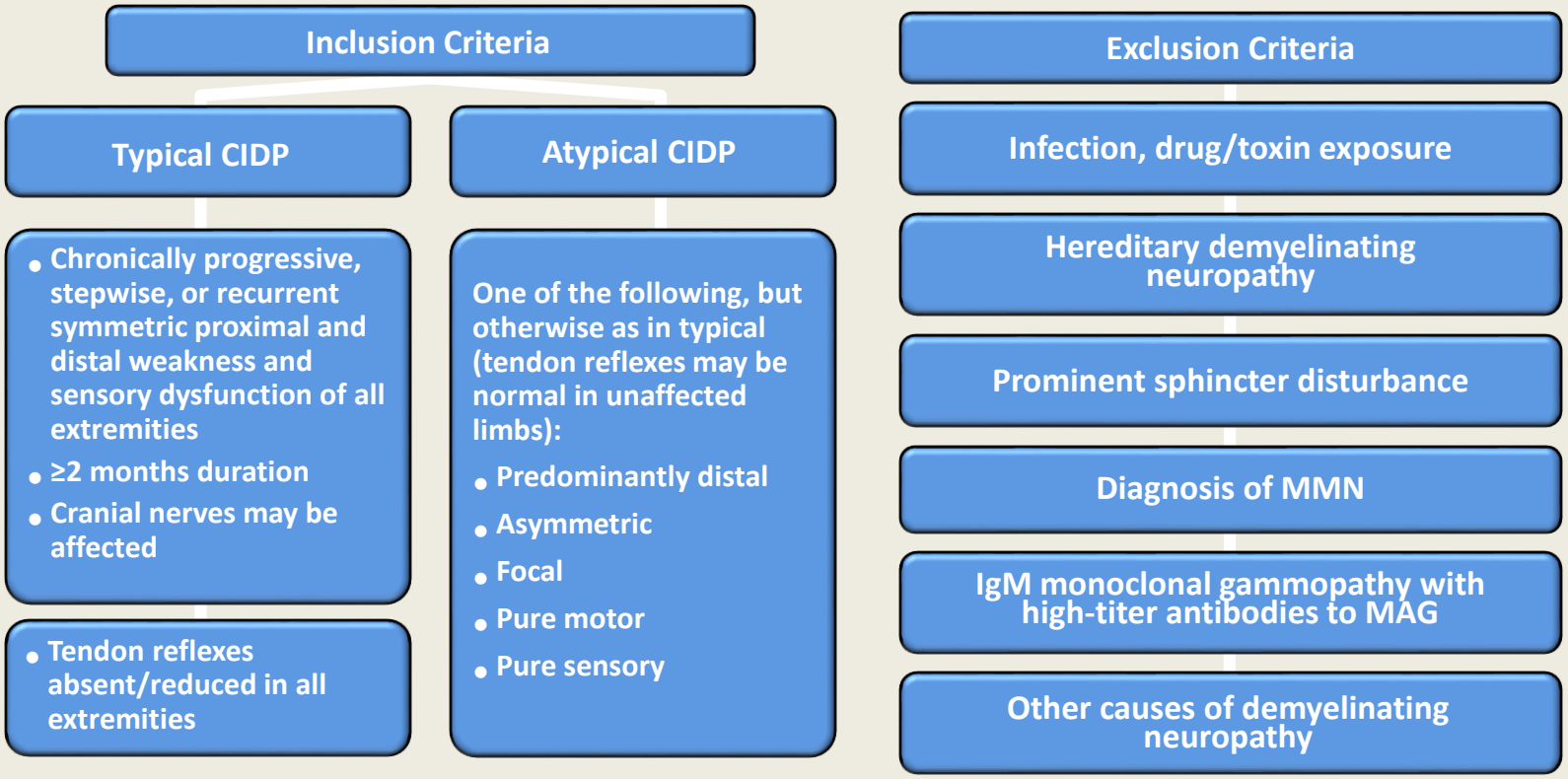
Laboratory Evaluation of Multifocal Motor Neuropathy

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



Katz J, et al. *Neurology*. 1997;48:700-707.
Hahn AF, at al. *Peripher Nerve Syst*. 2013;18(4):321-330.

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



EFNS = European Federation of Neurological Societies; MAG = myelin-associated glycoprotein; MMN = multifocal motor neuropathy; PNS = Peripheral Nerve Society. Van den Bergh PYK, et al. *Eur J Neurol.* 2010;17(3):356-363.