

POLYNEUROPATHY + NEURONOPATHY: Points in Differential Diagnosis

Selective Functional Involvement

<p>Motor Motor Neuropathy: Multifocal (MMN); Distal Motor Neuron Disorders Lower Motor Neuron (LMN): BvVL; Fazio-Londe; Madras Spinal Muscular Atrophies (SMA): 5q; BSMA; Infantile; HMN ALS: Sporadic; Hereditary Toxic: Pb; Dapsone; Botulism; Tick Acute: Porphyria; Axonal GBS (AMAN); Polio; West Nile Diabetic amyotrophy</p>	<p>Autonomic Diabetes Mellitus; Amyloid; Paraneoplastic Immune: Acute; GBS; Vasculitis Multisystem: Shy-Drager; IOH; Mitochondrial Hereditary: Riley-Day; Sensory PN; HSN II Infections: Chagas; Leprosy; HIV Toxic: Vacor; Perhexiline; Vincristine Hyperhidrosis: Arsenic; Hg; Acrylamide Localized: RSD; Horner's</p>	<p>Treatable neuropathies Diabetes; Vasculitis; CIDP; Lymphoma; Infection; Toxic; Compression Deficiency: B₁₂; E; Cu Antibody: GM1; TS-HDS; MAG; Neurofascin; Contactin-1; GALOP ? FGFR3; Cryoglobulin; M-protein</p>
<p>Sensory: Large fiber & Ataxic Tabes dorsalis; Vitamin deficiency: B12; E Toxic: Vitamin B6; cis-platinum; Taxol; MeHg Hereditary: an-α-lipoproteinemia; Friedreich's; CANVAS Ataxia telangiectasia; Biemond; OPCA; HSN Immune: MAG; GALOP; GD1b; Miller-Fisher Neuronopathies: Hu; Sjögren's Rule out: Myelopathy; HTLV1; HIV</p>	<p>Sensory: Small fiber Leprosy; Amyloid; Idiopathic Toxic: Kepone; Ciguatera Metabolic: Diabetes; Increased Triglycerides Hereditary HSN I & IV; Tangier's, Fabry's; Indifference; Thermoanalgesia; Navajo HSN + Paraparesis (Cavanagh)</p>	<p>Neuropathy + Pain Diabetic amyotrophy; Vasculitis; Idiopathic; Polio; HIV; Ca meningitis; Toxic: EtOH; Arsenic; Ilosfamide cis-Platinum; Thallium; Thalidomide Hereditary: Fabry's; HSN I; Erythralgia Focal: Median & Post tibial n. Other: Roots; Plexus</p>

Selective Anatomical Distribution: Most are symmetric and maximal distally in the lower extremities

<p>Extraocular muscle Botulism Diabetes Miller-Fisher Diphtheria Rule out: MG; Myopathy</p>	<p>Proximal Motor Immune Demyelinating: GBS; CIDP SMA; Porphyria Plexopathy: Brachial; Lumbar Rule out: Joint pain; Myopathy</p>	<p>Proximal Sensory Hereditary: Porphyria; Tangier Neuropathy: Hu; Sjögren's Thoracic neuropathy Rule out: Myelopathy Skin temperature-related Leprosy</p>	<p>Upper extremity Immune: MMN; Vasculitis CIDP variant Amyloid: Carpal tunnel Entrapment: HNPP; Other Toxic: Lead; Vincristine ALS; LMN Rule out: Spinal; CNS</p>	<p>Asymmetric Mononeuritis multiplex Neuropathy: ALS; Sensory Entrapments Plexopathies Toxic Mononeuritis Multiplex Vasculopathy; Amyloid; Leprosy; Diabetes; CMV Waldenström; Perineuritis Demyelinating: HNPP; Multifocal CIDP; MMN Compression: Multiple Lymphoma: Intraneural Wartenberg</p>
<p>CNS Spinal: Organophosphate; Hexacarbon; AMN; MLD; Lymphoma; Cuban; Vernant's Optic: Disulfiram; CS₂; Hg; Drugs; NARP; CMT6; Post col & RP; Cuban; Vernant's Hearing loss: HMSN X, 1A, 1B, 4D, 6; Mitochondrial; Sarcoid Cerebellum: FA; AT; MLD; Refsum; A-β-lipoproteinemia; SCA 2, 3, 4; IOSCA; CANVAS; Hu & CV-2 Supratentorial: Mitochondrial; Thyroid; Hu; B12; Vasculitis; Neoplastic; Sarcoid Infection: Lyme; HIV; Rabies; Syphilis; West Nile Hereditary: Polyglucosan; Fabry; HexA; Porphyria; Prion; ALS; Cowchock; NAD; Krabbe; MLD</p>		<p>Face Bell's Palsy Melkersson; Tangier Polyradiculopathies: Sarcoid; Lyme; GBS Motor neuron disorders: ALS; Kennedy's; Möbius Rule out: MG; Myopathy</p>		

Time Course

<p>Acute Immune: GBS; Vasculitis Toxic: Botulism; Thallium; Vacor; Drugs; Org-phos Infections: Tick; Lyme; HIV; West Nile Leptospirosis; Rabies; CMV; Zika Porphyria; Paraneoplastic (Anti-Hu) Rule out: Myopathy; MG; Spinal</p>	<p>Hereditary CMT Demyel Dominant: IA PMP-22; IB & IE P0; IC LITAF; ID EGR2; IF NFL HNPP PMP-22, KARS; YARS; Thermosensitive; SOX10; DNM2; 10q24 III (PMP-22; P0; EGR2); CMT + Intermed NCV: 10q24; DNM2; YARS; INF2; GNB4; P0; GJB1 CMT Demyel Rec: III; 4A GDA P1; 4B MTMR2; 4B2 SBF2; 4B3 SBF1; 4C SH3TC2; 4D NDRG1; 4E EGR2; 4F Prx; 4G HK1; 4H FGD4; 4J FIG4; CCFDN CTD1 CMT X-linked: Connexin-32; Xp22.2; Xq26; Cowchock AIFM1; PRPS1; PDK3; AUNX1; Xq23 CMT Axon AD: 2A MFN2; 2B RAB7; 2C TRPV4; 2D GARS; 2E NFL; 2F HSPB1; 2G 12q12; 2I P0; 2K GDAP1; 2L: HSPB8; 2M DNM2; 2N AARS; 2O DYNC1H1; 2P LRSAM1; 2Q DHTKD1; HMSN-P TFG; HNA1 SEPT9; VCP; 2T DNAJB2; 2U MARS 2V NAGLU; 2W HARS; 2Y MORC2; 2Z; MORC2; 2CC NEFH; DGAT2; TFG; MME CMT Axon AR: 2A LAM A/C; 2B MED25; F HSPB1; 2K GDAP1; P LRSAM1; R TRIM2; S IGHMBP2; T MME; X SPG11; P0; HINT1; HSJ1; MFN2; PNKP; MCM3AP CMT + CNS: Andermann KCC3; Deafness; Optic Δ; NAD; GAN Gigaxonin; AR-CMT2 + Pyramidal 8q21; Lethal Neonatal; TDP1; CANVAS (RBC1) Myelin, Recessive: Cockayne; Refsum (PAO & Peroxin-1); Krabbe; MLD; CMT 4E; P0; EGR-2 ALS: AD SOD; SETX; VAPB; ANG; NFH; TDP-43; FIG4; VCP; Ataxin-2; GRN; HNRNPA1; BSCL2; Mat3; TUBA4A; DAO; GLE1; SS18L1; ANXA11; ATXN2; BSCL2; FUS; c9orf72; PFN1; UBQLN2; SQSTM1; ErbB4; CHMP2B; CHCHD10; 20p13 AR NF-H, Alsin; PRPH; FUS; Spatacsin; OPTN; SIGMAR1; PNPLA6; c19orf12; PNPLA6; OPTN SMA: AR Xq12; SMN; SCO2 & TK2 (Mito Δ); ATP7A; P 3q13; VAPB; DYNC1H1; TRPV4 HMN: HSPB 1,3 & 8; GARS; BSCL2; ATP7A; DCTN1; SETX; PLEKHG5; FBLN5; IGHMBP2 Sensory, Dominant: HSN1 SPTLC1 & 2; ATL1 & 3; DNMT1; GJB3; ARHGEF10; RNF170; PRNP; SCN9A & 11A Sensory, Recessive: HSN2 HSN2; HSN3 (Riley-Day) IKBKAP; Tangier; SCN9A; Dystonin; FLVCR1; MPV17; PRDM12 HSN4 NTRK1; HSN5; NGF-β; ATM; FA FRDA; Fabry; DHH; NARP; HSN2; FAM134B; ATSV; CCT5; CLTCL1</p>
<p>Relapsing CIDP \pm GBS Hereditary: Porphyria; HNPP; HNA; Thermosensitive; Refsum</p>	
<p>Childhood Onset Immune: CIDP; GBS Hereditary: NAD; HMSN I & III; MLD Giant Axonal; Lethal neonatal; Tangier; CCFDN; Congen Hypomyelin;Krabbe</p>	

Other Features

<p>Paraneoplastic Myopathy: RIIM; DM-VP; Type II atrophy; Decorin Antibody; Rippling muscle; Metabolic; Scleromyxedema NMJ: MG (Thymoma); LEMS (Small cell Ca) Nerve: Hu; Motor neuropathy; Isaac's; M-protein Neuromyopathy (wt loss > 15%); Autonomic (Hu) Spinal: Necrotizing; Stiffman (Breast +) Cerebellar: Yo (Gyn); Tr (Lymphoma); Hu; LEMS; Ma Opsoclonus/Myoclonus - Child (Neuroblastoma), Adult, Ri Encephalopathy: Hu; Thymoma; Ma2 (Ta)</p>	<p>GI disorders Neuropathy Hereditary: Hirschsprung; MEN; Pseudoobstruction Infection: Polio; Chagas MNGIE; Diabetes; Amyloid; Hu; POEMS; Porphyria Vitamin \downarrow: B₁₂; E Myopathy: Inflammatory; \uparrow Thyroid; Visceral Dystrophy: Myotonic; Duchenne; Oculopharyngeal; Oculopharyngodistal Spinal: Syringomyelia</p>	<p>Large nerves Leprosy; CIDP; Amyloid; Acromegaly; Entrapment Hereditary: Refsum; HMSN I & III; Noonan Neoplasm: Focal; Diffuse: Lymphoma Local: Entrapment; Tumors; Mononeuropathy</p>	
<p>Demyelination Immune: GBS; CIDP; MMN; MAG; Sulfatide; GALOP; POEMS Toxic: Amiodarone; Perhexiline; Diphtheria; Na cyanate; Buckthorn Hereditary: HMSN I, III, IV; HNPP; Krabbe; MLD; Refsum Mitochondrial: MNGIE; NARP</p>	<p>Spontaneous Activity Complex repetitive Dystonia Fasciculations ALS; MMN; Normal Hyperekplexia (Startle) Myokymia Isaac's; Radiation Neuroomyotonia Myotonia Stiffman Syndrome Tetanus</p>	<p>Antibodies: For M-protein use immunofixation IgM vs GM1, NS6S or GalNac-GD1a: Motor neuropathy IgG vs GM1, GM1b, GalNac-GD1a: AMAN IgM vs GM2: Sensory > Motor; Demyelinating IgM vs GD1b: Sensory; Axonal; CANOMAD IgM vs TS-HDS, IgG vs FGFR3 or PD1: Sensory; Pain; Axonal IgG vs GQ1b: Miller-Fisher; Ophthalmoplegia IgM vs MAG: Sensory > Motor; Ataxia; Tremor IgM vs Sulfatide or GALOP: Sensory; Gait Δ IgG vs Hu: Sensory neuron; IgG vs Yo, Tr, Hu: Cerebellar IgM vs Tubulin or IgG vs NFASC, CNTN1: Demyelin PN IgG vs CRMP5: Polyneuropathy + Cerebellar</p>	<p>Nerve biopsy: \uparrow Utility Asymmetric PN Age > 65 + Disabled Sensory loss Abnormal NCV Diagnoses Vasculitis; \pm CIDP Systemic: Leprosy; Amyloid; Sarcoid Hereditary: MLD Giant axonal; Fabry; Krabbe</p>