Ca lâm sàng viêm đa rễ dây thần kinh mãn tính

PGS.TS CAO PHI PHONG

2018

BỆNH ÁN

Họ và tên: PHẠM THỊ HỒNG H….. Giới tính: Nữ.
Dân tộc: Kinh
Năm sinh: 1977 (41 tuổi)
Nghề nghiệp: nội trợ
Địa chỉ: Kon Tum.
Ngày nhập viện: 17 giờ 29/11/2018.
Thuận tay (P).

Lý do vào viện yếu tứ chi

Bệnh gần 2 tháng nay, BN cảm thấy tê 2 bàn tay, cảm giác tê giống như kiến bò, tê càng ngày nhiều hơn. Sau đó khoảng 1 tuần tê lan xuống dần 2 chân và yếu tay chân, đi lại thấy khó khăn, không vững vàng nhưng vẫn sinh hoạt độc lập và không cần trợ giúp.

BN được khám và điều trị ngoại trú ở BVCR với ∆: Viêm đa rễ dây tk thể AMSAN (?), sau điều trị ngoại trú thì BN vẫn còn yếu tay chân, không thuyên giảm và cảm giác tê tay chân nặng dần nên nhập BV ĐHYD

Tiền căn: không ghi nhận bất thường

Tình trạng lúc NV ĐHYD :

Bệnh tỉnh, tiếp xúc tốt
HA : 120/ 80 mmHg , T: 37 , NT : 18l/p , M : 82 l/p
Da niêm hồng, không hạch ngoại vi
Sức cơ tứ chi 4/5, yếu gốc chi > ngọn chi
PXGC tứ chi (-)
Giảm cảm giác kiểu mang găng đi vớ.
Các chức năng khác chưa phát hiện bất thường.

TÓM TẮT BỆNH ÁN

BN nữ 44t, nhập viện vì : tê yếu tứ chi tiến triển.
Bệnh diễn tiến gần 2 tháng nay, gồm các triệu chứng:
- yếu tứ chi kiểu ngoại biên, yếu gốc chi > ngọn chi.
- giảm cảm giác tứ chi kiểu mang găng đi vớ.
- mất PXGC, rung giật bó cơ.

CHẨN ĐOÁN

Chẩn đoán hội chứng: liệt mềm 4 chi

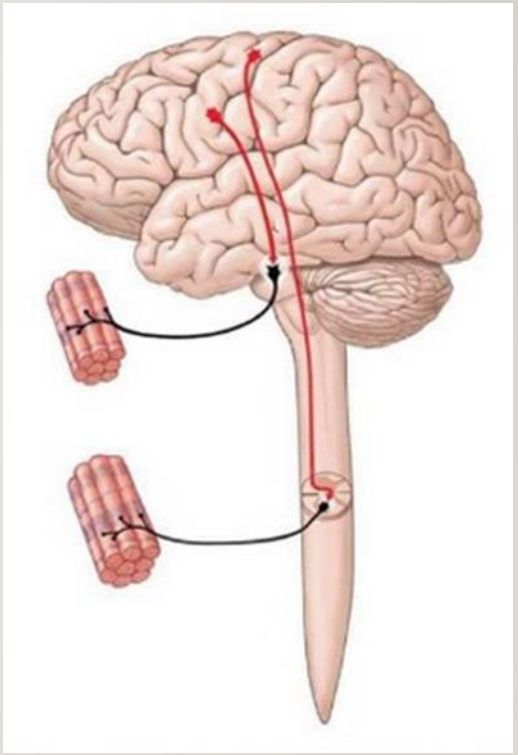
1. Vị trí ?

Tổn thương trung ương hay ngoại biên ?

CNS PNS

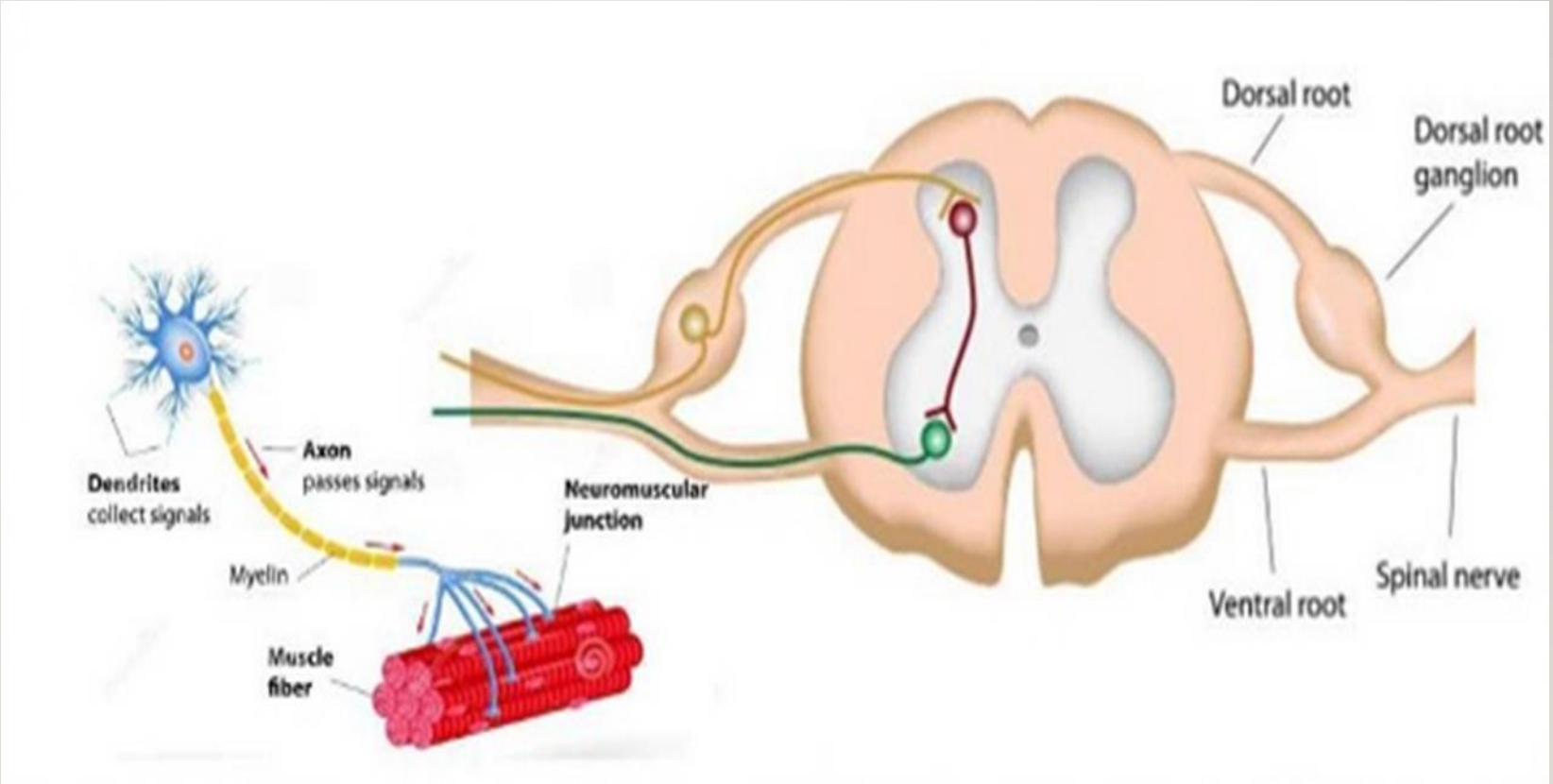
UMNL= lesion above

LMNL= lesion below

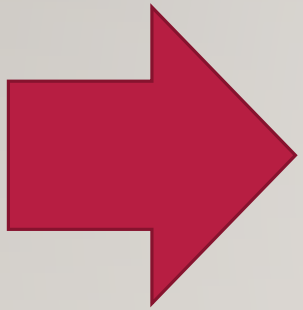


Tổn thương ngoại biên ?

1. Anterior horn cell 2. Motor neurons 3. Ventral root 4. Dorsal root ganglia	1. Dorsal root 2. Plexus 3. Peripheral nerve 4. Neuromuscular junction 5. Muscles



Neuronopathies: sensory, motor



- ***?SENSORY NEURONOPATHY***
- Ganglion cells predominantly affected
- Both proximal & distal involvement
- Sensory ataxia is common
- No weakness
- But awkward movement d/t sensory disturbances (vận động vụng về, rối loạn cảm giác)
- ***?MOTOR NEURONOPATHY***
- Disorder of ant horn cells
- Weakness,fasciculation,atrophy
- Not properly a process of peripheral NP

Bệnh lý đám rối (plexopathy)

- ***?PLEXOPATHY***
- Asymmetric
- Painful onset
- Multiple nerves in a single limb
- Rapid onset of weakness,atrophy
- Isolated reflex loss

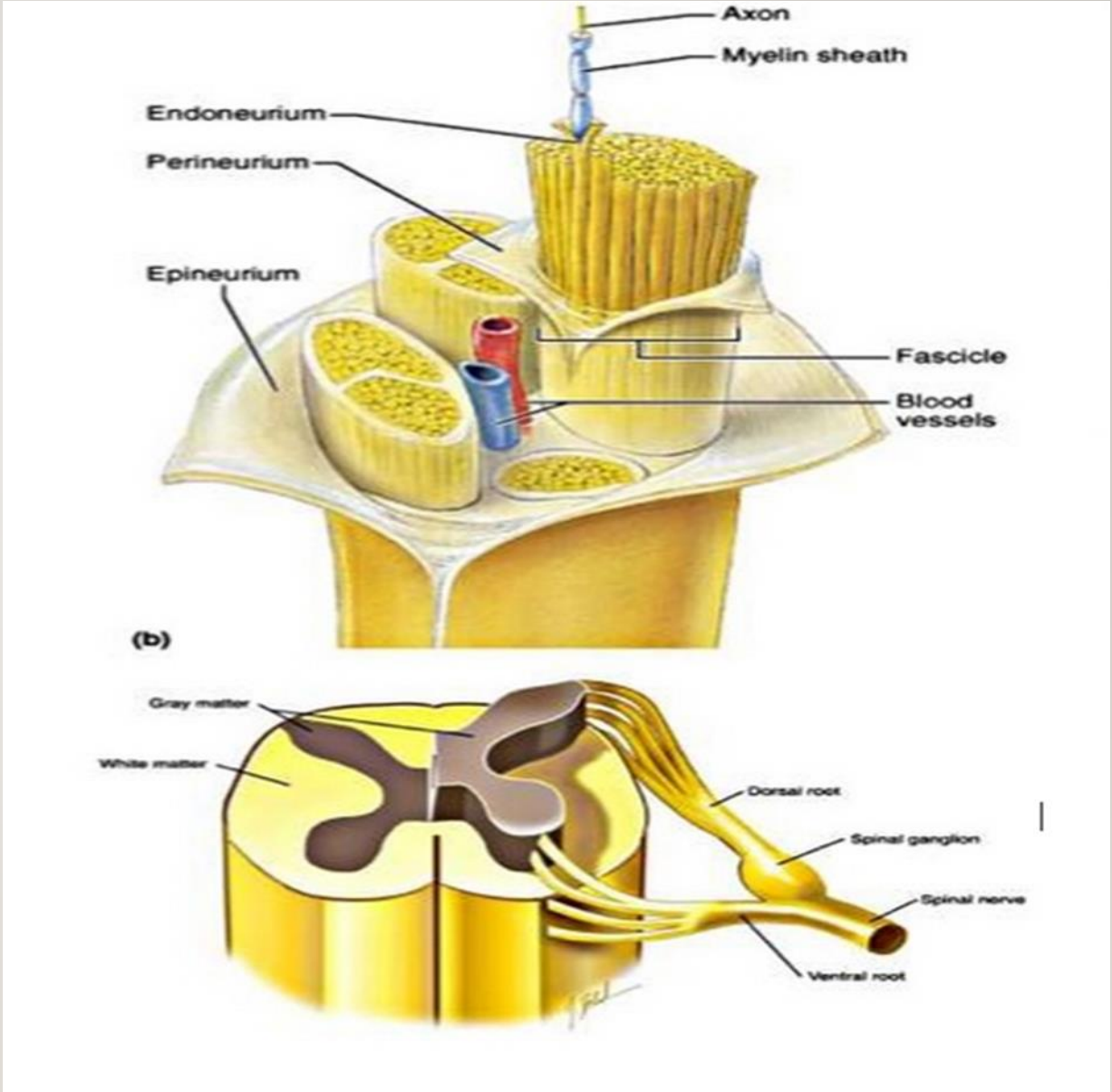
	AHC	Neuropathy	NMJ	Myopathy
Fatigue, diurnal weakness variation	-----	------	More in evening	-----
Distribution of weakness	distal	distal	Extraocular, bulbar	Prox except SMA
fasciculation	marked	Maybe+ve	absent	absent
wasting	severe	Can occur	Usually neg	absent
Sensoryloss	absent	Usually+	absent	+
DTR	dec/Nl	absent	normal	Nl/dec

1. Sừng trước
2. Dây thần kinh
3. Tiếp hợp thần kinh
4. Bệnh cơ

- Mệt mỏi, Yếu thay đổi trong ngày
- Phân bố yếu cơ
- Rung giật bó cơ
- Mất cảm giác
- Phản xạ gân cơ

SMA (spinal muscular atrophy)

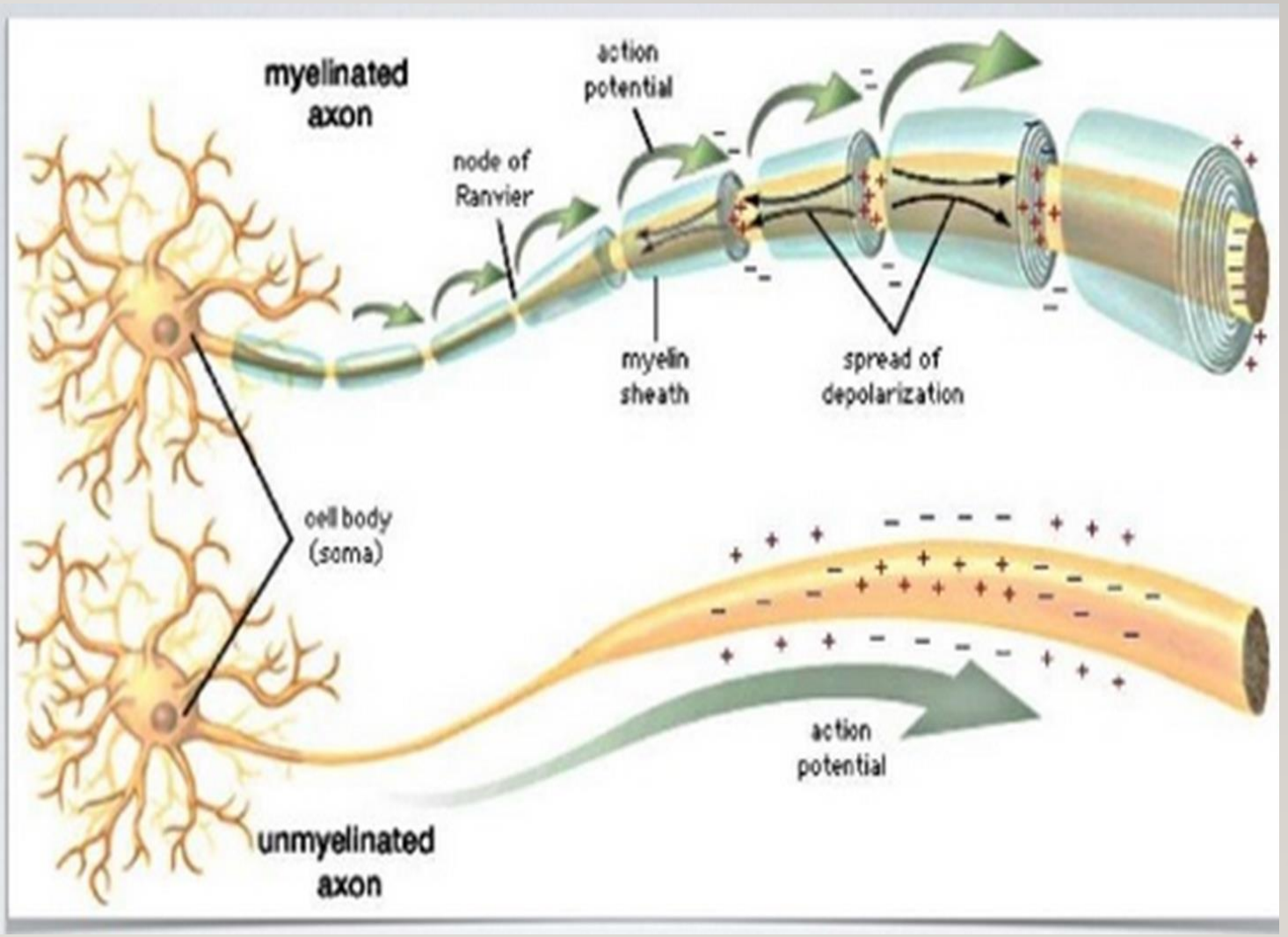
Sợi TK: vận động ? cảm giác ? tự động ?
Phân bố: đối xứng, không đối xứng, gốc, ngọn chi ?
Tiến triển: cấp, bán cấp, mãn ?



Tổn thương sợi trục ? Mất myelin hay cell body ?

Length-dependent axonal degeneration typically occurs in axonal neuropathies. This "dying back" phenomenon occurs in the largest and longest axons. Because in these axons the demand for maintenance is highest and delivery of metabolites most challenging, impairment of metabolic processes essential for maintenance of axonal integrity is thought to explain this length-dependency.

Thoái hóa sợi trục phụ thuộc chiều dài



AXONAL	DEMYELINATING	NEURONAL
Distal>proximal Length dependent	Proximal=distal	Non length dependent UE,LE,face
Slow evolution	Acute/subacute	rapid
Dysesthesia&distal weakness	Paraesthesia&weakness	ataxia,paraesthesia
Pain&temp affected>vib,proprioception	Vibration&proprioception>pain&temp	Vibration&proprioception>pain&temp
Distal weakness	Distal & proximal weakness	Proprioceptive weakness

1. Sợi trục
2. Mất myelin
3. Neuronal(cell body)

Gốc, ngọn, phụ thuộc chiều dài
Tiến triển: chậm, cấp, bán cấp, nhanh
Loạn cảm khó chịu, dị cảm
Đau , nhiệt, Rung âm thoa, vị trí,
Yếu ở gốc, ngọn, cảm giác sâu.

AXONAL	DEMYELINATING	NEURONAL
Distal areflexia	areflexia	areflexia
Amplitude affected>velocity	Velocity>amplitude	Sensoryamplitude affected. radial>sural
Axonal degeneration&regeneration	Demyelination&remyelination	Axonal degeneration,no regeneration
Slow recovery	Rapid recovery	Poor recovery

Phản xạ
Biên độ, Cường độ
Thoái hóa, tái sinh: sợi trục hay myelin
Hồi phục: chậm, nhanh hay kém

Polyneuropathy

(đối xứng lan tỏa thường bắt đầu ngoại biên)

Cấp/mãn ổn/tiến triển

Tái phát/khỏi bệnh

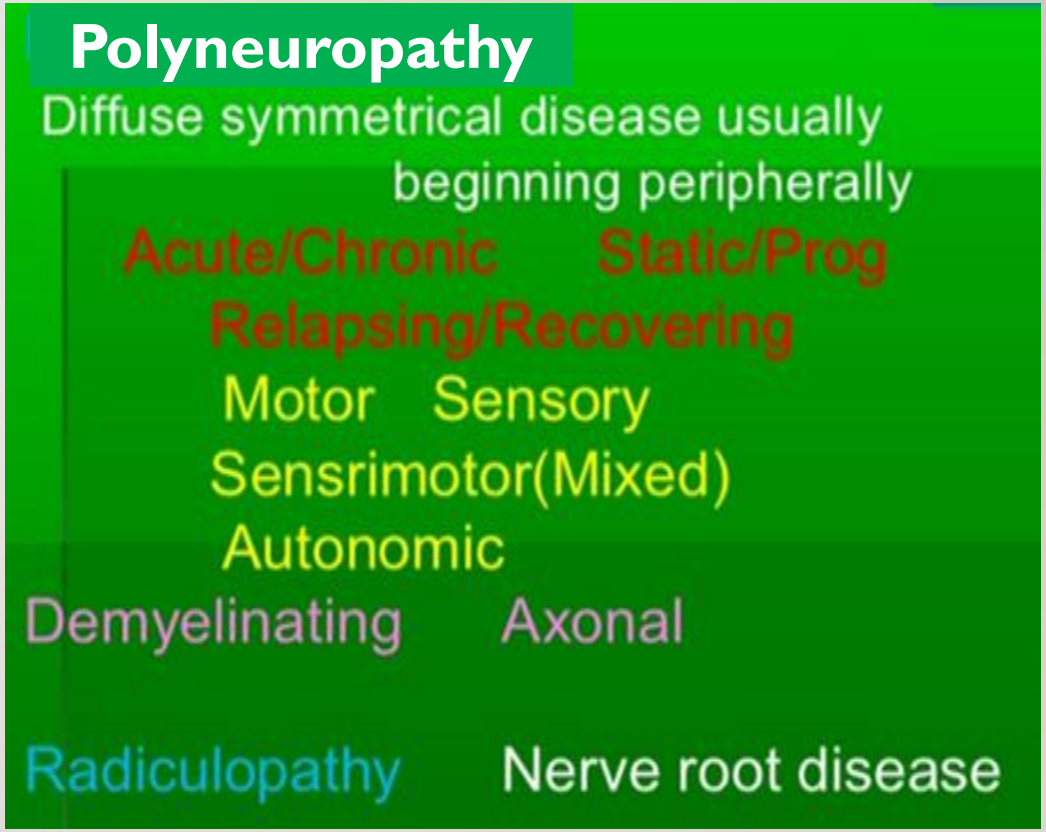
Vận động Cảm giác

Vận động cảm giác

Tự động

Mất myelin Sợi trục

Bệnh lý rễ bệnh rễ thần kinh



CA LÂM SÀNG

Bệnh đa dây thần kinh cảm giác và vận động tổn thương mất myelin nguyên phát, thoái hóa sợi trục thứ phát giai đoạn mãn(?): CIDP

	Chỉ danh	Kết quả
1	DÂY DẪN THẦN KINH	- Vận động: + Tiềm thời ngoại vi vận động kéo dài, giảm biên độ vận động, vận tốc dẫn truyền thần kinh giảm: dây thần kinh giữa, dây thần kinh trụ, dây thần kinh chầy sau và dây thần kinh mác sâu hai bên. + Mất đáp ứng sóng F: dây thần kinh giữa bên (P) và dây thần kinh trụ bên (T). + Có hiện tượng block dẫn truyền thần kinh và phát tán theo thời gian ở tất cả các dây thần kinh vận động. - Cảm giác: mất đáp ứng ở tất cả các dây thần kinh được khảo sát.
2	ĐIỆN CƠ KIM	- Có hiện tượng mất và tái phân bố thần kinh ở các cơ chi trên và chi dưới.
3	KẾT LUẬN	- Dựa trên bằng chứng điện sinh lý, khảo sát này ghi nhận: Bệnh đa dây thần kinh cảm giác và vận động, tổn thương mất myelin nguyên phát và hủy sợi trục thứ phát, giai đoạn mãn tính tiến triển.- Kết hợp với bệnh sử tiến triển hơn 2 tháng, kết quả này gợi ý Bệnh viêm đa rễ và dây thần kinh mất myelin mãn tính (CIDP - Chronic Inflammatory Demyelinating Polyradiculoneuropathy)

Dịch não tủy

Glucose : 6.5mmol/l
Bilirubin toàn phần : 0.58
Đường DNT : 5.2
Protein DNT : 145
Chlor : 109
Lactic acid : 2.04
Tế bào ?

Sinh hóa, huyết học

		Dịch vụ	Kết quả	Bình thường
1	XN SINH HÓA	Glucose	5.1	3.9-6.4 mmol/L
2		. Glucose	92	70-115 mg/dL
3		Ure	19.17	10.2-49.7 mg/dL
4		Creatinine	0.57*	Nam: 0.84-1.25; Nữ: 0.66-1.09 mg/dL
5		. eGFR (MDRD)	118	>= 60 ml/ph/1.73 m2
6		GOT/ASAT	18	Nam <40 U/L; Nữ <31 U/L
7		GPT/ALAT	16	Nam <41 U/L; Nữ <31 U/L
8		Natri	138	136 - 146mmol/L
9		Kali	3.24*	3.4 - 5.1 mmol/L
10		Định lượng Clo	105	98 - 109 mmol/L
11		Định lượng Calci toàn phần	2.18	2.10 - 2.55 mmol/L
12		LDH	119.1	<248 U/L
13		CPK	53.2	<171 U/L
14		CK-MB	11	<25 U/L
15		Phản ứng CRP	2.4	<5 mg/L
16		Lactate máu (Lactic acid/ máu)	2.18	0.5 - 2.2 mmol/L
17	XN HUYẾT HỌC	Tổng phân tích tế bào máu bằng máy đếm laser		
18		WBC	5.14	4 - 10 G/L
19		- NEU %	45.7	45 - 75% N
20		- NEU #	2.35	1.8 - 7.5 N
21		- LYM %	25.9	20 - 35% L
22		- LYM #	1.33	0.8 - 3.5 L
23		- MONO %	8.9	4 - 10% M
24		- MONO #	0.46	0.16 - 1.0 M

		Dịch vụ	Kết quả	Bình thường
44		PLT	220	150 - 450 G/L
45		MPV	11.1	7 - 12 fL
46		PDW		
47		Máu lắng (bằng máy tự động)		
48		- 1 giờ	5	<= 10 mm
49		- 2 giờ	15	<= 20mm
50		Thời gian Prothrombin (PT.TQ) bằng máy tự động		
51		- PT	12.9	11.0-14.5 giây (STAGO)
52		- PT %	107	70-140%
53		- INR	0.96	0.8-1.2
54		- PT (bn)/PT (chứng)	0.97	0.8-1.2
55		Thời gian thromboplastin hoạt hoá từng phần (APTT)		
56		. APTT	31.7	25.0 -34.0 giây (STAGO)
57		. APTT (bn)/APTT (chứng)	1.02	0.8 - 1.2
58	XN MIỄN DỊCH	HBsAg	0.26 ÂM TÍNH	S/CO <1
59		Anti-HCV	0.07 ÂM TÍNH	S/CO <1
60		Treponema pallidum TPHA định tính	0.05 ÂM TÍNH	S/CO <1
61		HbA1C	4.2*	4.4%-6.0 % (Phương pháp HPLC Tc
62		TSH	0.956	0.38 - 5.33 mIU/L
63		FT4	11.24	7.9 - 14.4 pmol/L
64		Alpha FP (AFP)	1.46	< 7.43 IU/mL
65		CEA	1.77	< 5.0 ng/mL

		Dịch vụ	Kết quả	Bìn
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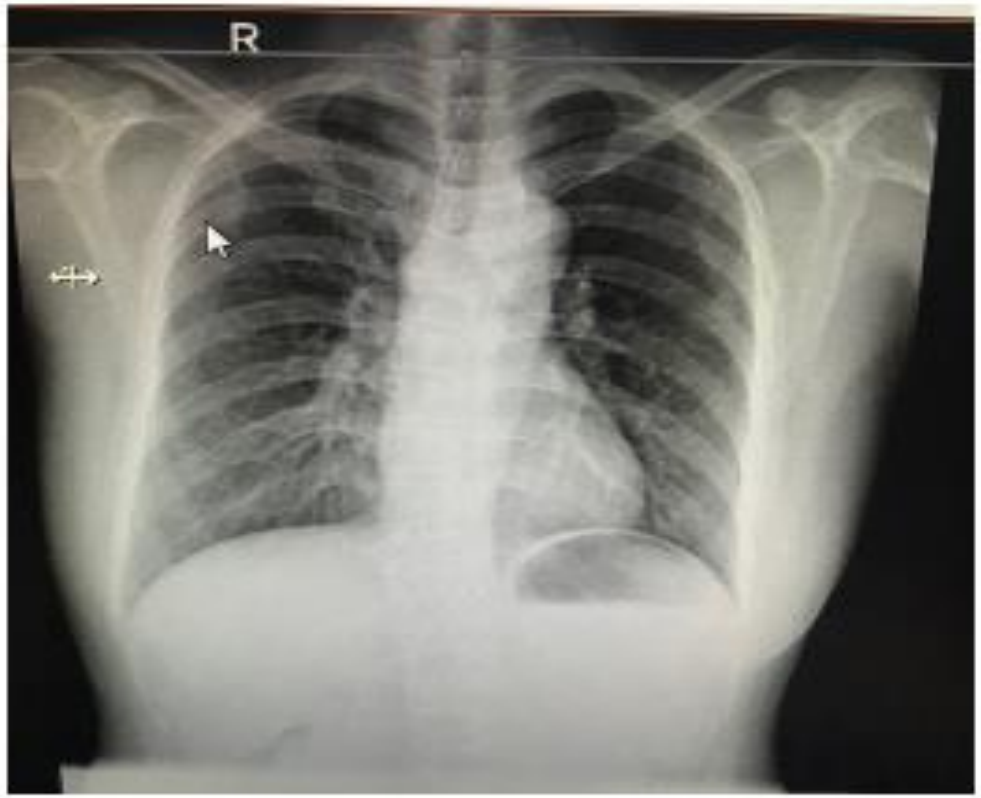
65		CEA	1.46	< 7.43 IU/mL
66		CA 19-9	1.77	< 5.0 ng/mL
67		Cyfra 21 - 1	10.6	<35 U/mL
68		Định lượng VITAMIN - B12 (Active) (Holotranscobalamin)	1.2	< 3.3 ng/mL
69		Định lượng kháng thể kháng nhân (ANA) bằng máy tự động	49.5	25.1 - 165.0 pmol/L
70		Định lượng kháng thể kháng DNA chuỗi kép (Anti dsDNA) bằng máy tự động/ bán tự động		<0.8 Âm tính, 0.8-1.1 Grayzone, >
				<25 IU/mL

UOC	Nước tiểu 10 thông số (máy)	Kết quả	Bình thường
	. . COLOR	MÀU VÀNG	(Vàng nhạt)
	. . CLARITY	TRONG	(Trong)
	. . GLU	ÂM TÍNH	(Bình thường: <1.7 mmol/L)
	. . BIL	ÂM TÍNH	(Âm tính: <3.4 umol/L)
	. . KET	ÂM TÍNH	Âm tính: <0.5 mmol/L
	. . SG	1.009*	(1.01 - 1.025)
	. . pH	7.5	(4.8 - 7.5)
	. . . Alb/Cre (bán định lượng)	BÌNH THƯỜNG*	<3.4 mg/mmoL
	. . PRO	ÂM TÍNH	(Âm tính: <0.1 g/L)
	. . URO	3.2	(Bình thường: <17 umol/L)
	. . NIT	ÂM TÍNH	(Âm tính)
	. . LEU	ÂM TÍNH	Âm tính: <10 /uL
	. . BLOOD	ÂM TÍNH	(Âm tính: <5 Ery/uL)
	. . Pro/Cre	BÌNH THƯỜNG	mg/mmoL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Chẩn đoán nguyên nhân ?

Nguyên bệnh lý đa dây thần kinh

1. **metabolic**-DM,amyloidosis,porphyria
2. **infections**-leprosy,HIV,CMV,syphilis, diphtheria,lymedisease
3. **immune**- GBS,CIDP ,MMN
4. **hereditary**-CMT
5. **Toxic**-drugs,alcohol,heavymetals
6. **vasculitis**-PAN,CSS,cryoglobulinemia
7. **paraneoplastic**-lung
8. **nutritional**- B1,B6,B12

	Common	Unusual	Rare
Metabolic/endocrine	DM CRF	Hypothyroidism	Porphyria Acromegaly
Toxic	Alcoholism Chronic liver disease Drugs	Lead Radiation	Arsenic,Mercury Thallium,Organophosph , Acrylamide Hexacarbons (glue)
Immune-mediated/inflammatory		Polyarteritis nodosa Churg-Strauss disease SLE Rheumatoid arthritis Sjögren's disease Cryoglobulinaemia Paraproteinaemia	Coeliac disease Sarcoidosis Primary amyloidosis
Infective		HIV/AIDS	Lyme disease
Neoplastic		Lymphoma Ca (infiltration /paraneoplastic) ,Myeloma	
Vit def		B,E,FA.	

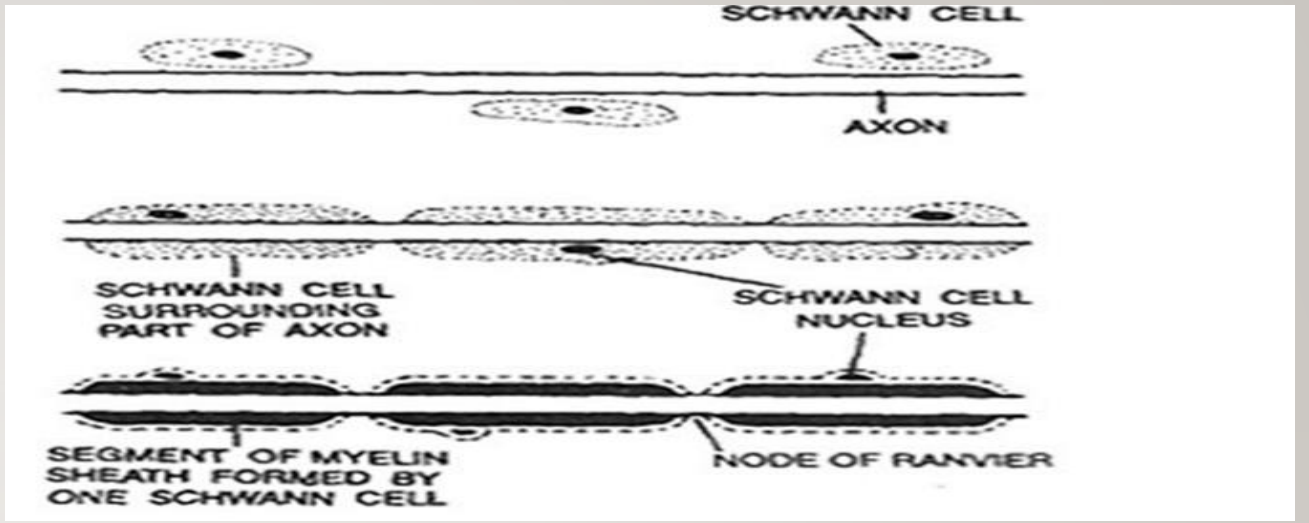
Nguyên nhân tổn thương: Sợi trục, mất myelin, neuronal

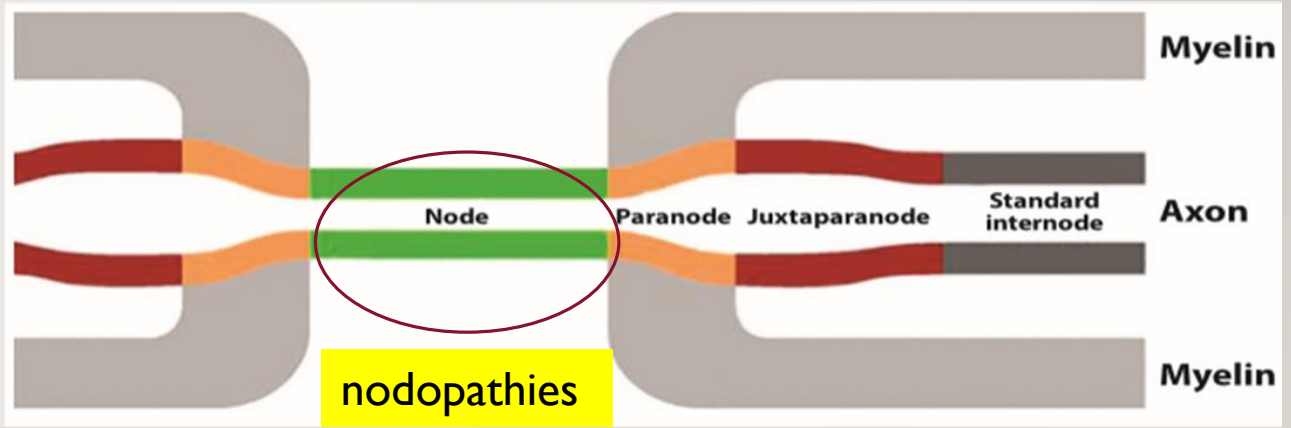
AXONAL	DEMYELINATING	NEURONAL
Toxic	GBS	Sjogren's
metabolic	diphtheria	cisplatin
HIV	CIDP	pyridoxine
Diabetes mellitus	Diabetes mellitus	
CMT	MMN	

	Focal (monoNP)	Multifocal (mononeuropathy multiplex)		Generalised (polyneuropathy)	
Neurophysiology		Acute	Chronic	Acute	Chronic
Demyelinating NCS(slowed conduction / conduction block) **Mất myelin**	Entrapment	Diphtheria	Leprosy Paraproteinaemia	GBS Suramin toxicity	Hereditary CIDP Lymphoma Osteoclastic MM IgM MM Arsenic Amiodarone Diphtheria
Axonal: NCS: (reduced or absent action potentials, normal conduction velocities) **Tổn thương sợi trục**	Severe entrapment	Diabetes Vasculitis Lyme disease Cryoglobulinaemia	Diabetes Neoplastic Infiltration HIV Sarcoidosis Amyloid	Alcohol GBS variants Toxins Critical illness Porphyria Paraneoplastic Tick paralysis	Metabolic/ endocrine (as DM) Alcohol Drugs /toxins Vitamin defi Hereditary IgG MM Paraneoplastic Primary amyloidosis

Demyelinating Polyneuropathies

- Predominantly demyelinating peripheral neuropathies affecting myelin or Schwann cells may be either acquired or heritable
- Demyelinating neuropathies impair nerve conduction by allowing current leakage through exposed axons where a paucity of ion channels exists, thus impeding action potential propagation
- Acquired demyelinating neuropathies are thought to be immune mediated through either cellular or humoral mechanisms
- Antigenic targets are located in the paranodal or juxtaparanodal regions of the internode





(Diagram of a myelinated axon, showing subdivision into sections with different diameters)

(bệnh lý tk ngoại biên mất myelin ảnh hưởng myelin hay tế bào Schwann có thể mắc phải hay di truyền. Bệnh thần kinh mất myelin cho phép dòng điện thoát ra qua bộc lộ sợi trục nơi có số ít kênh ion hiện diện, đe dọa sự lan truyền điện thế động)

Predominantly Demyelinating Polyneuropathies/ Polyradiculoneuropathies

- Charcot-Marie-Tooth disease type 1
- Charcot-Marie-Tooth disease type 3
- Charcot-Marie-Tooth disease type 4
- Hereditary neuropathy with liability to pressure palsies (HNPP)
- Krabbe disease
- Metachromatic leukodystrophy
- Refsum disease
- Cockayne syndrome
- Acute inflammatory demyelinating polyradiculoneuropathy (AIDP)
- Chronic inflammatory demyelinating polyradiculoneuropathy (CIDP)
- Polyneuropathy, organomegaly, endocrinopathy, monoclonal plasma cell disorder, and skin changes (POEMS) syndrome
- Multifocal motor neuropathy (MMN)
- Multifocal acquired demyelinating sensory and motor neuropathy (MADSAM)
- Distal acquired demyelinating symmetric neuropathy (DADS)
- Toxins (diphtheria, buckthorn, amiodarone, *n*-hexane, arsenic)

Nodopathies

- Now it is recognized that some toxic, immune mediated, and hereditary disorders target proteins and ion channels in the nodal region
- These disorders have been referred to as ***nodopathies or channelopathies***
- The best example is the acute motor axonal neuropathy (AMAN) variant of the Guillain-Barre ´syndrome.
- This disorder is characterized by rapid decline of compound muscle action potential (CMAP) amplitudes, suggesting motor axon loss
- The rapid resolution of clinical and nerve conduction study changes, however, is not compatible with expected recovery from that mechanism of injury.
- Conduction block produced by impaired ion channel function *unassociated with anatomic myelin or axonal injury provides a more likely explanation for the rapidly reversible conduction failure seen in this disorder*

Nodopathies

- Acute motor axonal variant of Guillain-Barré syndrome
- Guillain-Barré syndrome with autoantibodies associated with nodal antigens
- Chronic inflammatory demyelinating polyradiculoneuropathy (CIDP) associated with autoantibodies to nodal antigens
- Miller Fisher syndrome
- Multifocal motor neuropathy (MMN)
- Marine toxins (saxitoxin, ciguatoxin, tetrodotoxin)
- Drugs with ion channel blocking properties (phenytoin) (more electrophysiologic than clinical)
- Possibly critical illness polyneuropathy
- Possibly ischemic monomelic neuropathy
- Possibly thiamine deficiency

CA LÂM SÀNG

- Chẩn đoán xác định
  - CIDP
- Điều trị
  - Corticosteroid

BÀN LUẬN


HONEY, I HAVE
CIDP
(Chronic Inflammatory
Demyelinating Polyneuropathy)
?

RECURRENT AIDP & CIDP CONTINUM OR DISTINCT ENTITIES??

CIDP

- SLOWLY PROG.COURSE >4-8 WKS
- MORE FREQUENCY OF RELAPSES
- PRECEEDING H/O VIRAL INF URI / GI INFECTION RARE
- RESPIRATORY FAILURE IS UNCOMMON
- DIFFUSE CONDUCTION SLOWING
- RESPONSE TO PREDNISONE

AIDP

- COURSE STATIC OR IMPROVES BY 4WKS
- RARELY RELAPSE ESP IN POST TRANSPLANT PTS
- PRECEEDING H/S/O INFECTION
- RESPIRATORY FAILURE IS COMMON
- PATCHY CONDUCTION SLOWING
- NO RESPONSE TO STEROIDS

Bệnh lý đa dây thần kinh tái phát

RECURRENT POLYNEUROPATHY

Relapsing CIDP

Porphyria

Refsum's disease

HNPP (Hereditary neuropathy with pressure palsies (HNPP))

GBS

Beriberi

Toxic neuropathy

Định nghĩa CIDP

The term CIDP – A chronic progressive or relapsing symmetric sensori-motor neuropathic disorder with cytoalbuminologic dissociation and interstitial and perivascular endoneurial infiltration by lymphocytes and macrophages.

Chronic equivalent of AIDP.

- ❑ Rối loạn tk vận động-cảm giác đối xứng, tiến triển mãn tính hay tái phát
- ❑ Phân ly đạm tế bào
- ❑ Tương đương AIDP mãn tính

- The major differences between the two conditions are in the time course and their response to corticosteroids.

- CIDP has
  - -A more protracted clinical course
  - -Rarely associated with preceding infections
  - -An association with human lymphocyte antigens
  - -Response to corticosteroid therapy

CIDP
- diễn tiến lâm sàng kéo dài hơn
- Ít khi liên hệ nhiễm trùng trước
- Liên hệ kháng nguyên lymphocyte người(HLA)
- Đáp ứng corticoid

Two patterns —

-Two third of patients show a continuous or stepwise progressive course over months to years
-One-third have a relapsing course with partial or complete recovery between recurrences

Acute-onset CIDP is rare.

- 2/3 bn tiến triển liên tục hay từng bước nhiều tháng đến nhiều năm
- 1/3 tái phát với hồi phục một phần hay toàn bộ giữa tái phát
- Khởi phát cấp rất ít

The age of onset may influence the course of the disease—

-Younger (mean 29 years) -relapsing course

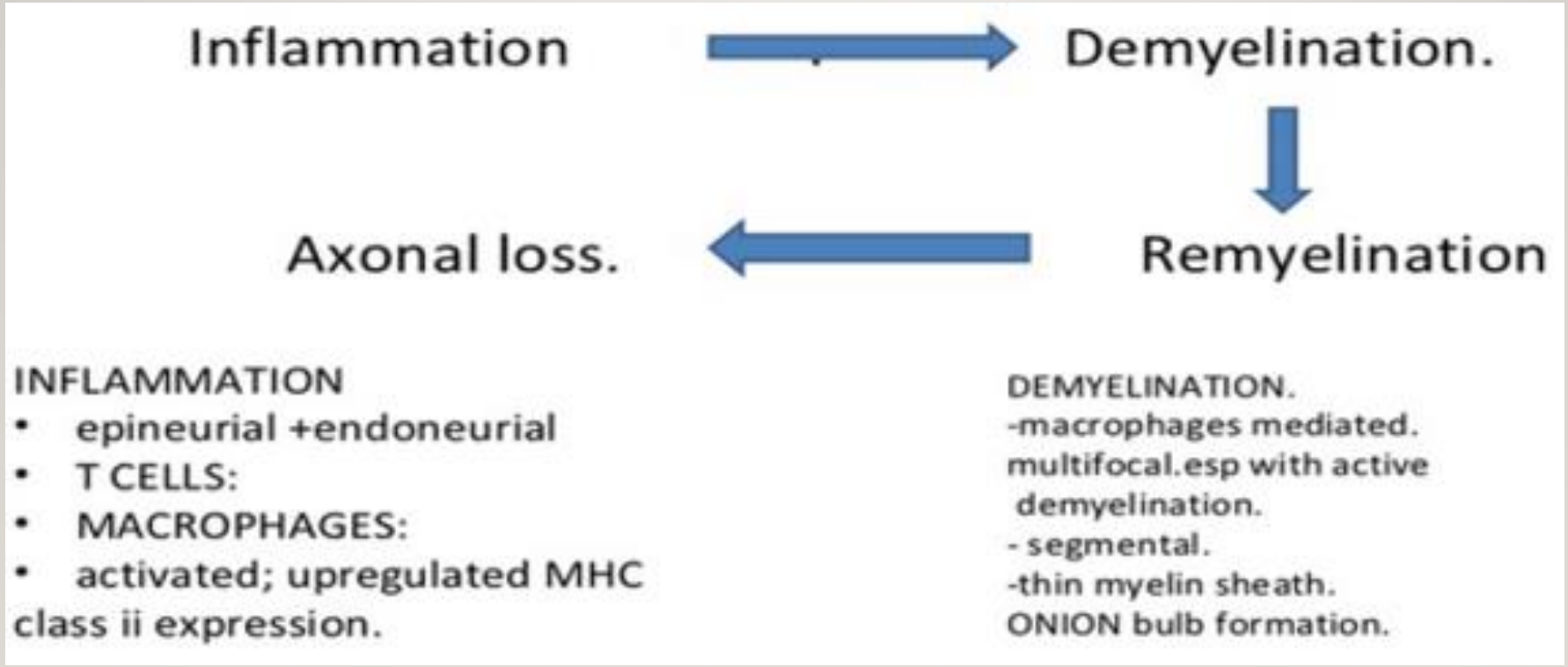
-Older (mean 51 years)- chronic progressive course

Tuổi khởi phát ảnh hưởng diễn tiến của bệnh

- Trẻ, tiến triển tái phát
- Lớn tuổi, tiến triển mãn

- CIDP, mô tả một nhóm liên hệ bệnh dây thần kinh, tất cả mãn tính, mất myelin, viêm nhiễm và thường gặp trung gian miễn dịch
- Thể kinh điển liên hệ vận động > cảm giác, đối xứng, yếu liệt cả cơ gốc và ngọn chi
- Giảm hay mất toàn bộ phản xạ hầu hết bn
- Các dây sọ và liên hệ hành tủy xảy ra rất ít
- Diễn tiến chậm phần lớn bn, giảm bệnh-tái phát ghi nhận ít nhất1/3 bn

BỆNH SINH


Inflammation
Demyelination.
Remyelination
Axonal loss.
INFLAMMATION
• epineurial +endoneurial
• T CELLS:
• MACROPHAGES:
• activated; upregulated MHC
class ii expression.
DEMYELINATION.
-macrophages mediated.
multifocal.esp with active
demyelination.
- segmental.
-thin myelin sheath.
ONION bulb formation.

<u>Although the cause of CIDP and its variants is unknown</u>, there is evidence to support the hypotheses that the disorder(s) are **immunologically based and have multiple triggers**. Both the cellular and humoral components of the immune system appear to be involved in the pathogenesis of CIDP and its variants.

- ❑ Cellular immunity involvement is supported by evidence of T-cell activation, crossing of the blood-nerve barrier by activated T-cells, and by expression of cytokines, tumor necrosis factor, interferons, and interleukins.

- ❑ Humoral immunity is implicated by the demonstration of immunoglobulin and complement deposition on myelinated nerve fibers, and by passive transfer experiments that induce conduction block and demyelination by injecting serum or purified IgG from CIDP patients into rats.

- *Giả thuyết miễn dịch và nhiều yếu tố gây ra: cả thành phần thể dịch và tế bào*
- *Hoạt hóa tế bàoT, qua hàng rào máu thần kinh: cytokines, TNF, interferon và interleukins*
- *Miễn dịch thể dịch: immunoglobulin và bổ thể đọng lại trên sợi tk myelin gây block dẫn truyền và mất myelin*

- The immunologic cause(s) of most forms of CIDP remain unclear, since specific provoking antigens have not previously been identified
- However, antibodies to different isoforms of neurofascin or to contactin have been detected in small numbers of patients with CIDP.
- Neurofascin and contactin are critical structural elements of the paranodal loop attachment to the axolemma. The antibodies identified are in the IgG4 subclass.
- These antibodies appear to target paranodal proteins and may disrupt the axonal-glial junctions, leading to nerve conduction slowing
- As seen in another IgG4-mediated neuromuscular disorder, MuSK antibody myasthenia gravis, some of these CIDP cases were not responsive to intravenous immunoglobulin and glucocorticoids but were responsive to B cell depletion treatment with rituximab

LÂM SÀNG

Mô tả đầu tiên CIDP năm 1975, các đặc điểm chính của rối loạn

- Thể kinh điển CIDP đối xứng, liên hệ vận động hơn cảm giác
- Yếu cơ cả cơ gốc và ngọn, đặc trưng của demyelinating polyneuropathy mắc phải .
- Dây sọ và liên quan cầu não xảy ra 10-20% bn. Run thường gặp trong nhiều nghiên cứu

- Hầu hết bn CIDP có rối loạn cảm giác và giảm hay mất toàn bộ phản xạ
- Tổn thương cảm giác trong CIDP thường gặp cảm giác rung âm thoa và vị trí nhiều hơn đau nhiệt do tổn thương sợi lớn có myelin
- Không giống vận động, tổn thương cảm giác có xu hướng từ ngọn đến gốc, liên hệ sớm ngón tay, ngón chân và bàn chân
- Loạn cảm đau (Painful dysesthesias) có thể xảy ra. Đau lưng có thể có.
- Triệu chứng lumbar spinal stenosis và cauda equina syndrome có thể gặp

- Thần kinh tự động liên hệ CIDP thường nhẹ, phân bố hạn chế, bón và bí tiểu thường không xảy ra sớm, nhưng gặp trường hợp nặng

- Hầu hết bn CIDP diễn tiến bệnh chậm chạp nhưng tiến triển hết bệnh-tái phát ghi nhận ít nhất1/3 trường hợp và có thể nhiều hơn bn trẻ

- Most patients - symmetrical motor and sensory involvement
- Occasional cases with predominantly motor involvement may be seen (Rotta et al., 2000).
- To fulfill diagnostic criteria for CIDP, weakness must be present for at least 2 months.
- Proximal limb weakness is almost as severe as distal limb weakness, indicating a non-length-dependent neuropathy.

Yếu phải hiện diện ít nhất 2 tháng
Yếu gốc = ngọn chi, đặc trưng non-length dependent neuropathy

- Muscle wasting is rarely pronounced.
- Both upper and lower limbs are affected- legs>Arms.
- Generalized hyporeflexia or areflexia is the rule.
- Sensory symptoms in a stocking-glove distribution (numbness or tingling) implicating large-fiber involvement occur frequently, whereas pain occurs less frequently.

Teo cơ ít gặp
Ảnh hưởng cả 2 chi, chân> tay
Triệu chứng cảm giác kiểu đi gang mang vớ, sợi lớn thường gặp

Additional findings-

- Postural tremor of the hands
- Enlargement of peripheral nerves
- Papilledema, and facial or bulbar weakness.
- Rarely, respiratory failure requiring mechanical ventilation or autonomic dysfunction may be seen.

Run tư thế
Phì đại tk ngoại biên
Phù gai thị, yếu cơ mặt và hành tủy
Ít gặp suy hô hấp cần thở máy hay rối loạn tk tự động

Thể lâm sàng ít gặp

- Massive nerve root enlargement, causing myelopathy or symptomatic lumbar stenosis
- Vision loss due to progressive pseudotumor cerebri (Midroni and Dyck, 1996).
- Occasionally, CIDP may be associated with a relapsing multifocal demyelinating CNS disorder resembling MS, with CNS demyelination confirmed by abnormal visual and somatosensory evoked potentials and brain MRI (Falcone et al., 2006).

BIẾN THỂ CIDP

Các biến thể lâm sàng CIDP được phân biệt bởi lâm sàng và cơ chế bệnh sinh, bao gồm:

- ❑ Lewis-Sumner syndrome,
- ❑ sensory-predominant CIDP,
- ❑ distal acquired demyelinating symmetric neuropathy,
- ❑ pure motor form,
- ❑ CIDP caused by autoantibodies directed against the paranodal proteins neurofascin and contactin,
- ❑ CIDP with central nervous system (CNS) involvement.

LEWIS-SUMNER VARIANT -MADSAM (MULTIFOCAL ACQUIRED DEMYELINATING SENSORY AND MOTOR NEUROPATHY)

- Focal conduction block or severe slowing of nerve conduction distinguish this multifocal demyelinating neuropathy from the vasculitic axon-loss multiple mononeuropathies.

- Multifocal variant of CIDP have clinical and electrophysiological involvement of both motor and sensory nerves, increased CSF protein, and a good response to corticosteroids

DADS VARIANT (DISTAL ACQUIRED SYMMETRICAL DEMYELINATING NEUROPATHY)-

- Focal conduction block or severe slowing of nerve conduction distinguish this multifocal demyelinating neuropathy from the vasculitic axon-loss multiple mononeuropathies.

- Multifocal variant of CIDP have clinical and electrophysiological involvement of both motor and sensory nerves, increased CSF protein, and a good response to corticosteroids

CHRONIC IMMUNE SENSORY POLYRADICULOPATHY-

-Present with a sensory ataxic syndrome with normal motor and sensory conduction studies.

-Sensory nerve root involvement is suggested by abnormal somatosensory evoked responses, enlarged lumbar roots on MRI, and elevated CSF protein.

-In selected cases, nerve root biopsy confirms segmental demyelination, onion bulbs, and endoneurial inflammation (Sinnreich et al., 2004).

-Respond to IVIG.

Chronic inflammatory lumbosacral polyradiculopathy

- Is considered a regional lower extremity variant of CIDP and is responsive to IVIG.
- Weakness and sensory disturbances limited to the legs, with normal motor and sensory nerve conduction studies
- CSF protein is elevated
- MRI often shows enhancing caudal and lumbosacral roots (caporale et al, 2011).

PREDNISONE-RESPONSIVE HEREDITARY MOTOR AND SENSORY NEUROPATHY

- A CIDP-like syndrome may develop in cases of inherited neuropathy.
- Positive family history of affected kin and bony abnormalities such as pes cavus and hammer toes from an early age
- Subsequently develop subacute deterioration with proximal muscle weakness and increased CSF protein.
- The newly acquired symptoms may respond to corticosteroid therapy.

ACQUIRED DEMYELINATING POLYRADICULONEUROPATHIES MEETING THE DIAGNOSTIC CRITERIA FOR CIDP MAY BE ASSOCIATED WITH

- -HIV-1 infection,
- -Systemic lupus erythematosus
- -Monoclonal gammopathy of undetermined significance (MGUS)
- -Plasma cell dyscrasias (macroglobulinemia osteosclerotic myeloma,
- -POEMS syndrome(Castleman disease)
- -Chronic active hepatitis
- -Inflammatory bowel disease
- -Hodgkin lymphoma.

CANOMAD

- **C**hronic **a**taxic **n**europathy,**o**phthalmoplegia,Ig**M** paraproteinemia,cold **a**gglutinins,**d**isialosyl antibody
- Signs and symptoms- loss of muscle, tendon, and joint sensation, ataxia, tingling sensation on the skin around the mouth or extremities, paralysis of eye muscles, difficulty swallowing and speaking, and rarely respiratory muscle weakness.
- IgM autoantibodies directed against gangliosides, specifically to GD1b and GQ1b (Arbogast et al., 2007; Eurelings et al., 2001; Willison et al., 2001)

- Compared with idiopathic CIDP, the patients with a monoclonal gammopathy-
  -Tend to be older
  -Have a more protracted course but less severe functional impairment at presentation
  -Respond less favorably to immunomodulatory therapy (Dalakas et al., 2009)

- CIDP is 10 times more frequent in diabetes mellitus, and respond to IVIG therapy (Sharma et al., 2002a)

DRUG INDUCED-

- Tacrolimus
- TNF-α antagonists including etanercept, infliximab, and adalimumab (Alshekhlee et al., 2010).
- The neuropathic manifestations in these patients may start as early as 2 weeks after initiation of therapy or as late as 16 months.

CHẨN ĐOÁN CIDP

Documentation of primary acquired demyelination of the peripheral nerves is the basic parameter for diagnosis of CIDP.

- Clinical profile
- EDX
- CSF
- Nerve biopsy findings

TIÊU CHUẨN CHẨN ĐOÁN

EDx CRITERIA-

- Reduction in motor conduction velocities in at least two motor nerves
  - <80% of lower limit of normal [LLN] if CMAP amplitude >80% of LLN and
  - <70% of LLN if CMAP amplitude <80% of LLN

- Partial conduction block
  -proximal CMAP amplitude and area <50% of distal in long nerve segments, or
  -proximal CMAP amplitude and area <20%–50% of distal in short nerve segments or

- Abnormal temporal dispersion in at least one motor nerve at non-entrapment sites

(độ phân tán)

EDx CRITERIA-

- Prolonged distal latencies in at least two motor nerves
  - >125% of upper limit of normal [ULN] if CMAP amplitude>80% of LLN, and
  - >150% of ULN if CMAP amplitude <80% of LLN)

- Absent F waves or prolonged F-wave latencies in at least two motor nerves
  - >125% of ULN if CMAP amplitude >80% of LLN, and
  - >150% of ULN if CMAP amplitude <80% of LLN).

- **At least three criteria are necessary to fulfill the diagnosis of CIDP.**

CSF

- Protein values >45 mg/dl in 95% of cases
- Levels above 100 mg/dl are common
- CSF pleocytosis is rare except in HIV-associated CIDP.

MRI

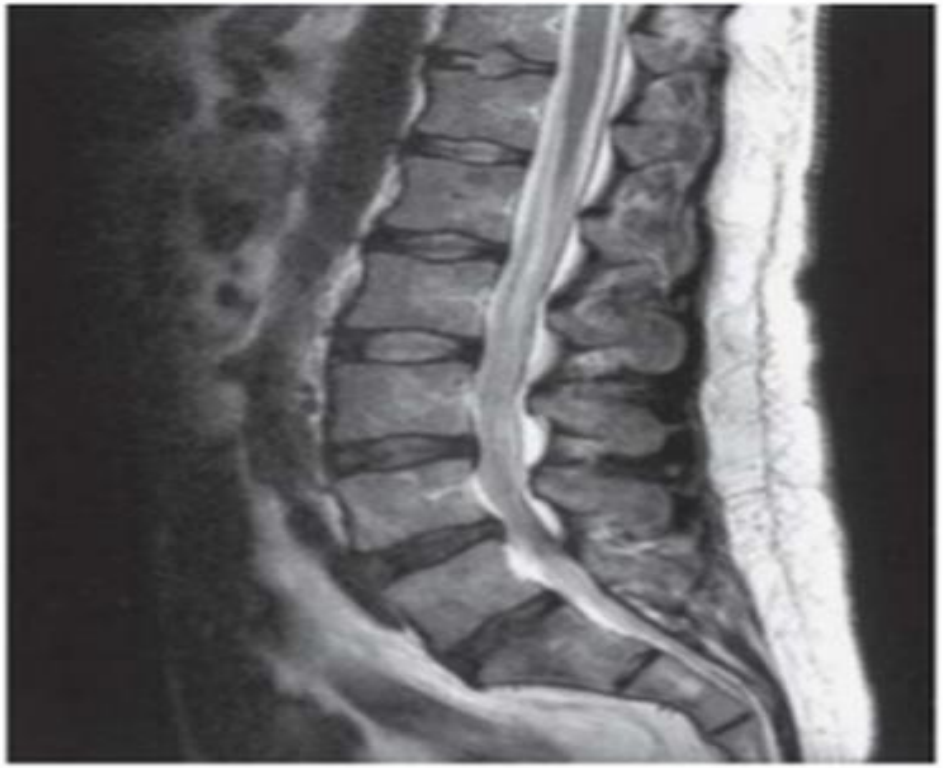
- Gadolinium enhancement of lumbar roots-providing radiological evidence of an abnormal blood–nerve barrier (Bertorini et al., 1995)

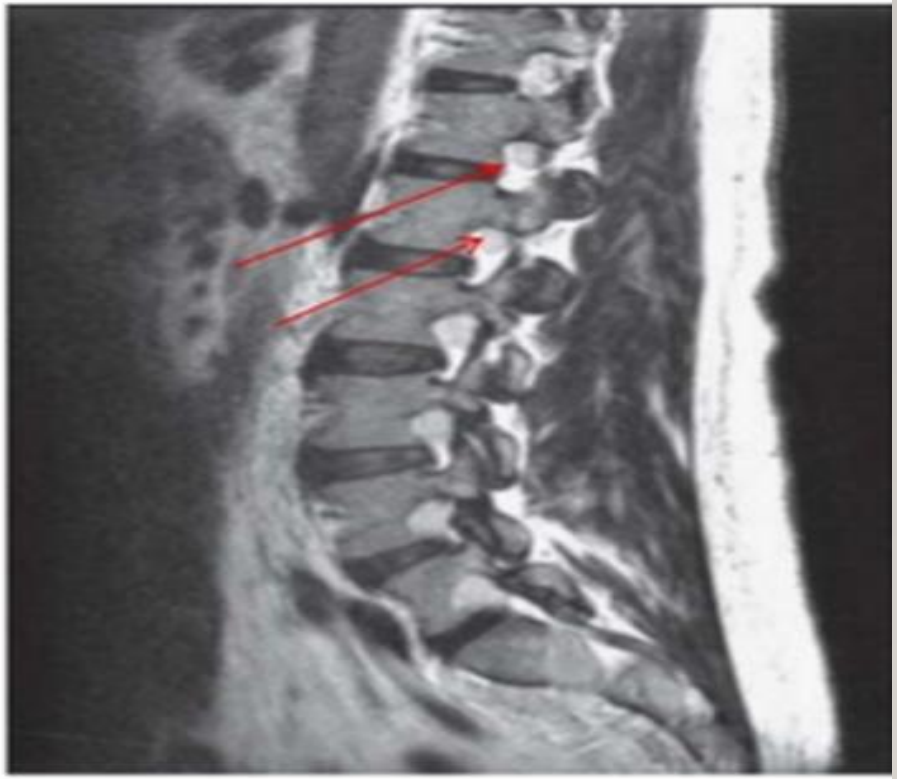
IMAGES

- CXR-sarcoidosis,malignancy
- Skeletal survey-multiple myeloma
- Screening for malignancy

- **AUTONOMIC FUNCTION TESTS**

- **Diagnostic tests imp in**
- Asymmetric,motor predominant,rapid onset,demyelinating neuropathy





A-T2-weighted postgadolinium sagittal lumbar magnetic resonance image showing diffuse enlargement of cauda equina, with abnormal enhancement, in patient with chronic inflammatory demyelinating polyradiculoneuropathy.
B-Hypertrophic nerve roots are best appreciated in parasagittal image

USG

- Increased nerve vascularization,
- Multiple sites of nerve enlargement,
- Increased intra- and inter-nerve size variabilities (goedee et al., 2014; Padua et al,, 2014).

OTHERS-TO DETECT CONCOMITANT DISEASES

(A) RECOMMENDED STUDIES

- Serum and urine paraprotein detection by immunofixation
- Fasting blood glucose
- Complete blood count
- Renal function
- Liver function
- Antinuclear factor
- Thyroid function

- **To detect hereditary neuropathy**

  -Examination of parents and siblings-Appropriate gene testing (especially PMP2 duplication and connexin 32 mutations)

- **Nerve biopsy**

SURAL NERVE BIOPSY

- The changes do not fully represent the pathological process taking place in motor roots or more proximal nerve segments.
- In one large series of biopsies, demyelinating features were seen in only 48%; 21% had predominantly axonal changes, 13% had mixed demyelinating and axonal changes, and 18% were normal.
- The value of nerve biopsy as a routine diagnostic tool for CIDP has been questioned.

SURAL NERVE BIOPSY

- A study conducted in 64 patients with CIDP used multivariate logistic regression analysis of sural nerve biopsy findings and other clinical and laboratory criteria to assess the value of nerve biopsy.
- Only high CSF protein (>100 mg/dL) and nerve conduction studies consistent with demyelination were strong predictors of CIDP
- Independent predictive value of the sural nerve biopsy could not be demonstrated (Molenaar et al., 1998).

- Sural nerve biopsy is helpful in supporting the diagnosis and excluding other causes of neuropathy

Để cải thiện chẩn đoán chính xác tránh nhầm lẫn :

- ❑ TIÊU CHUẨN
- (EFNS/PNS)

The European Federation of Neurological Societies and the Peripheral Nerve Society

EFNS/PNS criteria — The EFNS/PNS guideline defines CIDP as typical (ie, classic) or atypical. Atypical CIDP encompasses variants of CIDP with predominantly distal weakness such as distal acquired demyelinating symmetric neuropathy (DADS), and variants with pure motor or pure sensory presentations.

The diagnosis of CIDP is based upon clinical, electrodiagnostic (mandatory), and supportive criteria

❑ Clinical inclusion criteria for typical CIDP require both of the following:

• Chronically progressive, stepwise, or recurrent symmetric proximal and distal weakness and sensory dysfunction of all extremities, developing over at least two months; cranial nerves may be affected

• Absent or reduced tendon reflexes in all extremities

❑ Clinical inclusion criteria for atypical CIDP require one of the following,
but otherwise as in typical CIDP (tendon reflexes may be normal in unaffected limbs):

• Predominantly distal (distal acquired demyelinating symmetric neuropathy, DADS) or

• Asymmetric (multifocal acquired demyelinating sensory and motor neuropathy [MADSAM], Lewis-Sumner syndrome) or

• Focal (eg, involvement of the brachial or lumbosacral plexus or of one or more peripheral nerves in one upper or lower limb) or

• Pure motor or

• Pure sensory (including chronic immune sensory polyradiculopathy affecting the central process of the primary sensory neuron)

❑ Clinical exclusion criteria:

• Neuropathy probably caused by Borrelia burgdorferi infection (Lyme disease), diphtheria, drug or toxin exposure

• Hereditary demyelinating neuropathy

• Prominent sphincter disturbance

• Diagnosis of multifocal motor neuropathy

• IgM monoclonal gammopathy with high titer antibodies to myelin-associated glycoprotein

• Other causes for a demyelinating neuropathy including POEMS syndrome, osteosclerotic myeloma, diabetic and nondiabetic lumbosacral radiculoplexus neuropathy; peripheral nervous system lymphoma and amyloidosis may occasionally have demyelinating features

❑ **Supportive criteria**:

• Elevated cerebrospinal fluid protein with leukocyte count <10/mm3

• MRI showing gadolinium enhancement and/or hypertrophy of the cauda equina, lumbosacral or cervical nerve roots, or the brachial or lumbosacral plexuses

• Abnormal sensory electrophysiology in at least one nerve:

- Normal sural with abnormal median (excluding median neuropathy at the wrist from carpal tunnel syndrome) or radial sensory nerve action potential (SNAP) amplitudes; or

- Conduction velocity <80 percent of lower limit of normal (<70 percent if SNAP amplitude <80 percent of lower limit of normal); or

- Delayed somatosensory evoked potentials without central nervous system disease

- Objective clinical improvement following immunomodulatory treatment

- Nerve biopsy showing unequivocal evidence of demyelination and/or remyelination by electron microscopy or teased fiber analysis

- **Definite CIDP**

•Typical or atypical CIDP by clinical inclusion criteria, no clinical exclusion criteria, and definite CIDP by electrodiagnostic criteria ; or
•Probable CIDP plus at least one supportive criterion; or
•Possible CIDP plus at least two supportive criteria

- **Probable CIDP**

•Typical or atypical CIDP by clinical inclusion criteria, no clinical exclusion criteria, and probable CIDP by electrodiagnostic criteria ; or

•Possible CIDP plus at least one supportive criterion

- **Possible CIDP**

•Typical or atypical CIDP by clinical inclusion criteria, no clinical exclusion criteria, and possible CIDP by electrodiagnostic criteria

- CIDP (definite, probable, or possible) associated with concomitant disease

Koski criteria —The Koski criteria were derived by predictive modeling of the clinical data of 150 patients who were diagnosed by expert consensus as having CIDP or other polyneuropathies [61]. For the diagnosis of idiopathic CIDP, the Koski criteria require the following:

- Chronic polyneuropathy, progressive for at least eight weeks

- No serum paraprotein and no genetic abnormality, and either:

- Recordable compound muscle action potentials in at least 75 percent of motor nerves and either abnormal distal latency or abnormal motor conduction velocity or abnormal F wave latency in >50 percent of motor nerves or

- Symmetric onset or symmetric exam and weakness in all four limbs and proximal weakness in at least one limb

Of note, while the Koski criteria combine clinical presentation and electrophysiologic abnormalities, either is sufficient to establish the diagnosis. One of the striking features of this classification method is that patients who have symmetric proximal and distal weakness are so likely to have CIDP that nerve conduction studies are primarily confirmatory.

Diagnostic pitfalls — Both clinical experience and data from retrospective studies suggest that the over-diagnosis of CIDP is common, involving one-third to nearly one-half of patients so labelled. Furthermore, many of those with an erroneous diagnosis of CIDP receive long-term treatment with immunosuppressants.

Problems leading to a misdiagnosis of CIDP in these reports included the following:

- Failure to focus on symptoms and signs that characterize CIDP

- Technically inadequate or misinterpreted electrodiagnostic studies (eg, a lax electrodiagnostic interpretation of demyelination)

- Failure to adhere to diagnostic criteria(bám chặt vào tiêu chuẩn chẩn đoán)

- Over-emphasis on the importance of minimally elevated cerebrospinal fluid protein levels (ie, mild to moderate cytoalbuminologic dissociation)

- Excessive reliance on subjective measures of patient-reported treatment response(tin tưởng quá đáng…..)

To confirm the diagnosis of CIDP, the clinician must be sure that the patient has a clinical picture that is consistent with the diagnosis and that the electrophysiology and/or other studies (cerebrospinal fluid analysis, nerve biopsy, MRI) have features suggesting a demyelinating neuropathy.

CHẨN ĐOÁN CẬN LÂM SÀNG

- Electrodiagnostic testing is recommended for all patients with suspected CIDP. Additional studies that may be indicated in select patients include:

- Cerebrospinal fluid (CSF) analysis

- Nerve biopsy

- MRI of spinal roots, brachial plexus, and lumbosacral plexus

- Laboratory studies

- Evaluation for inherited neuropathies

Electrophysiology — Peripheral nerve demyelination underlies the characteristic electrophysiologic features of CIDP, which are as follows:

- Partial conduction block

- Conduction velocity slowing:
    - Prolonged distal motor latencies
    - Delay or disappearance of F waves

- Dispersion and distance dependent reduction of compound motor action potential (CMAP) amplitude

Genetic considerations — Certain genetic disorders of peripheral nerve myelin have characteristics that can mimic the clinical or electrodiagnostic features of CIDP or its variants. These include:

- Charcot-Marie-Tooth (CMT) disease, particularly CMT1A, adult-onset CMT1B, CMT1X, and recessive cases such as CMT4 (eg, CMT4C due to SH3TC2 gene mutations being the most common) can cause multi-focal, non-uniform slowing and conduction block.
- Hereditary neuropathy with liability to pressure palsies, which causes conduction slowing at compression sites.

A careful family history and examination of parents and siblings is important if these disorders are a consideration. Appropriate genetic testing should be considered in select patients, particularly for PMP22 gene duplication or deletion and connexin 32 mutations

ĐIỀU TRỊ

TREATMENT

- Corticosteroids, plasmapheresis, and IVIG are all effective in CIDP and are the mainstays of treatment.
- About 50%–70% of patients respond to each of these treatments.
- Almost 50% of patients not responding to the first treatment respond to the second therapy.

- The efficacy of these therapies were confirmed in recent Cochrane Reviews and in consensus statements published by several neurological associations

CORTICOSTEROID-

- Daily single-dose oral prednisone is started at 60 to 80 mg (1—1.5 mg/kg for children).
- Improvement can be anticipated to start within 2 months but may not be evident till 3 to 5 months (Van Schaik et al., 2010).
- Following improvement, the dose may be converted to an alternate-day, single-dose schedule.
- The initial daily dose is tapered to alternate-day prednisone by reducing the even-day dose by 10 mg/wk; high-dose alternate-day prednisone is maintained until a remission or plateau phase is achieved.

- More than 50% of patients reach this point by 6 months.
- After attaining maximum benefit, a slow taper of prednisone (e.g., 10 mg/mo followed by 5-mg/month decrements at doses below 50 mg on alternate days) can then begin.
- The individual patient's clinical improvement and side-effect profile serve as guides to the rapidity of the taper.

- Some patients are sensitive to reduction in corticosteroid dosage- reduced slowly to avoid a relapse.
- Patients may need alternate-day prednisone (10–30 mg) for years to suppress disease activity.
- Side effects from prolonged oral prednisone use are significant.
- Osteoporosis causing vertebral compression fractures, obesity, diabetes, hypertension, and cataracts are the most common long-term complications.

- Patients should be followed for the development of cataracts, increased intraocular pressure, hypertension, truncal obesity, hyperglycemia, aseptic necrosis of bone, peptic ulcer disease, and susceptibility to infection.
- Precautions -low-sodium (2 g/day) and low-carbohydrate diet and PPI.
- Calcium and vitamin D supplements and bone density should be monitoring.
- Oral bisphosphonates or nasal calcitonin.

- Pulse corticosteroid treatment -fewer side effects
- The most typical regimen -1000 mg/d of methylprednisolone on each of 3 to 5 consecutive days, followed by1000 mg IV on 1 day / week for the next month.
- Intravenous methylprednisolone was then tapered in frequency and dose over a period of 2 months to 2 years.

- Several patients were maintained with long-term high-dose intermittent IVMP every 2 to 12 weeks for up to 10 years with stable strength.

- High-dose intermittent IV or oral methylprednisolone has beneficial effects equal to those of oral prednisone and IVIG, and the side-effect profile and cost of treatment are less *(Lopate et al., 2005; Muley et al., 2008).*

- Pulse dexamethasone (40 mg/day × 4 days every 4 weeks) resulted in a similar remission rate and side effects as oral prednisone, but the patients improved twice as fast *(Van Schaik et al., 2010)*.

PLEX

- Three controlled studies have confirmed the benefit of therapeutic plasma exchange for CIDP of both chronic progressive and relapsing course.
- Ten plasma exchanges performed over 4 weeks resulted in substantial but transient improvement in 80% of patients (Hahn et al., 1996a).
- Improvement began within days of starting therapy, yet 70% of responders relapsed within 14 days after plasma exchange was stopped.

PLEX

- The optimal schedule for plasma exchanges has not been established and probably varies from patient to patient
- A common approach employs three exchanges (50 mL/kg) weekly for the first 2 weeks, followed by one or two exchanges per week from the third through the sixth week.
- Then the treatment frequency is adjusted according to clinical response.

PLEX

- Plasma exchange can only be performed in medical centers with special expertise in apheresis and requires secure vascular access.
- Plasmapheresis may be difficult to maintain for months or years
- Majority of patients needing prolonged plasmapheresis require the addition of prednisone for lasting benefit and stabilization

IV Ig

- The benefit of IVIG as the initial treatment of CIDP has also been established by several small studies (Fee and Fleming, 2003; Hahn et al., 1996b; Mendell et al., 2001).
- Improvement was seen as early as the first week of treatment, whereas maximal benefit was reached at 6 weeks.
- Those patients who respond initially may need maintenance infusions every 3–8 weeks.
- A randomized double-blind, placebo-controlled, crossover international trial (ICE study) used a loading dose of 2 g/kg over 2–4 days and then a maintenance infusion of 1 g/kg over 1–2 days every 3 weeks for up to 24 weeks

IV Ig

- The study showed that a statistically significant number of patients improved with IVIG compared to placebo, and the time to and probability of relapse was much lower for IVIG versus placebo (Hughes et al., 2008).

- This study resulted in the 2008 US Food and Drug Administration (FDA) approval of IVIG therapy (Gamunex 10%) for treatment of CIDP, the first neurological disease to be approved for such a therapy.

IV IG

- Treatment with at least two courses of IVIG administered 3 weeks apart may be required for initial improvement, and continued maintenance therapy is necessary to achieve a maximal therapeutic response (Latov et al., 2010).

- The high level of effectiveness less adverse events makes IVIG a good, although costly, first treatment choice.

IV IG ADVERSE EFFECTS

- Adverse reactions to IVIG therapy are usually minor ≤10% of patients (Brannagan, 2002; Wittstock and Zettl, 2006).
- Infusion-related reactions include migraine attacks, aseptic meningitis, chills, nausea, and myalgias.
- controlled by reducing the rate of infusion (<200 mL/h) or by pretreatment with acetaminophen and ibuprofen (see previous discussion).
- Diphenhydramine for allergic manifestations ,seen in about 6% of patients.

- **Thrombotic events** including stroke, myocardial infarction, retinal vein occlusion, and deep vein thrombosis may occasionally occur in patients with cardiovascular risk factors and increased serum viscosity, particularly with infusion rates of greater than 0.4 g/kg/day.

- Patients with pre-existing renal disease, especially the elderly, and those with diabetes mellitus and hypovolemia are at risk of developing acute **renal tubular necrosis**.

- RTA is often associated with IVIG products containing high concentrations of sucrose.
- Close monitoring of renal function, correction of hypovolemia, discontinuation of concomitant nephrotoxic drugs, and the use of products without sucrose are measures to prevent renal tubular necrosis in patients with pre-existing kidney disease.

- The serum IgA level may be determined before the first infusion
- Very low IgA levels may have allergic or anaphylactic reactions during later infusions; however, **current guidelines question the necessity of this precaution.**
- Comparison studies showed that the beneficial effect of IVIG is equivalent to plasmapheresis.
- Both treatments were equally efficacious but short lived, and most patients required continued intermittent treatment for sustained improvement.

- One trial compared IVIG (2 g/kg given over 1 or 2 days) with oral prednisolone (60 mg for 2 weeks followed by a taper over 4 weeks) in a crossover design.

- Both treatments resulted in improvement after 2 and 6 weeks, although IVIG tended to be slightly superior to oral prednisolone (Hughes et al., 2001a).

- A recent randomized controlled trial comparing the 6-month efficacy of IVIG to intravenous methylprednisolone showed that IVIG was more frequently effective and better tolerated than steroids during the first 6 months of treatment.

- However, when effective, steroids were more likely to induce remission and less frequently associated with deterioration after therapy discontinuation than IVIG (Nobile-Orazio et al., 2012).

- In clinical practice, treatment with IVIG, plasma exchange, or corticosteroids should be limited to those patients with neuropathic deficits of sufficient magnitude to justify the risks and expense of treatment

- Alternative forms of immunosuppressive treatment for those who are refractory to corticosteroids, plasma exchange, and IVIG.
- None of the alternative agents, however, have proven efficacy in controlled trials.

- Azathioprine (2–3 mg/kg/day) or mycophenolate mofetil (1000 mg twice daily) may be in long-term management.

- Use should be limited -inadequate response to corticosteroids or unacceptable side effects.

- Other immune interventions (Kieseier et al., 2006b) include-
  - Cyclosporine A (5 mg/kg in 2 divided doses per day),
  - Monthly infusions of cyclophosphamide (1 g/m2 monthly for 3–6 months),
  - Interferon alpha 29 (3 million international units [IU] subcutaneously 3 times a week for 6 weeks) (gorson et al., 1998).

- Rituximab (375 mg/m2 IV each week for 4 weeks) failed to reduce the IVIG dose in a pilot study (Gorson et al., 2007).

DỰ HẬU

- CIDP tends to be associated with prolonged neurological disability and is less likely to have spontaneous remissions.
- About 50% of patients are severely disabled
- 10% of patients remain disabled in spite of treatment.
- Although 95% of patients with CIDP show initial improvement following immunosuppressive therapy, the relapse rate is high and the degree of improvement modest.

- Despite the initial responsiveness, only 40% of patients remained in partial or complete remission without receiving any medication.
- Six years after onset of illness, 56% had good outcome, 24% deteriorated and failed to respond to all treatments, and 11% died of complications of the disease.
- Axonal loss on the nerve biopsy correlated with poorer outcome (Bouchard et al., 1999)

ANY QUESTIONS?