

Some clinical and pathologic observations on chronic myelopathy: a variant of multiple sclerosis

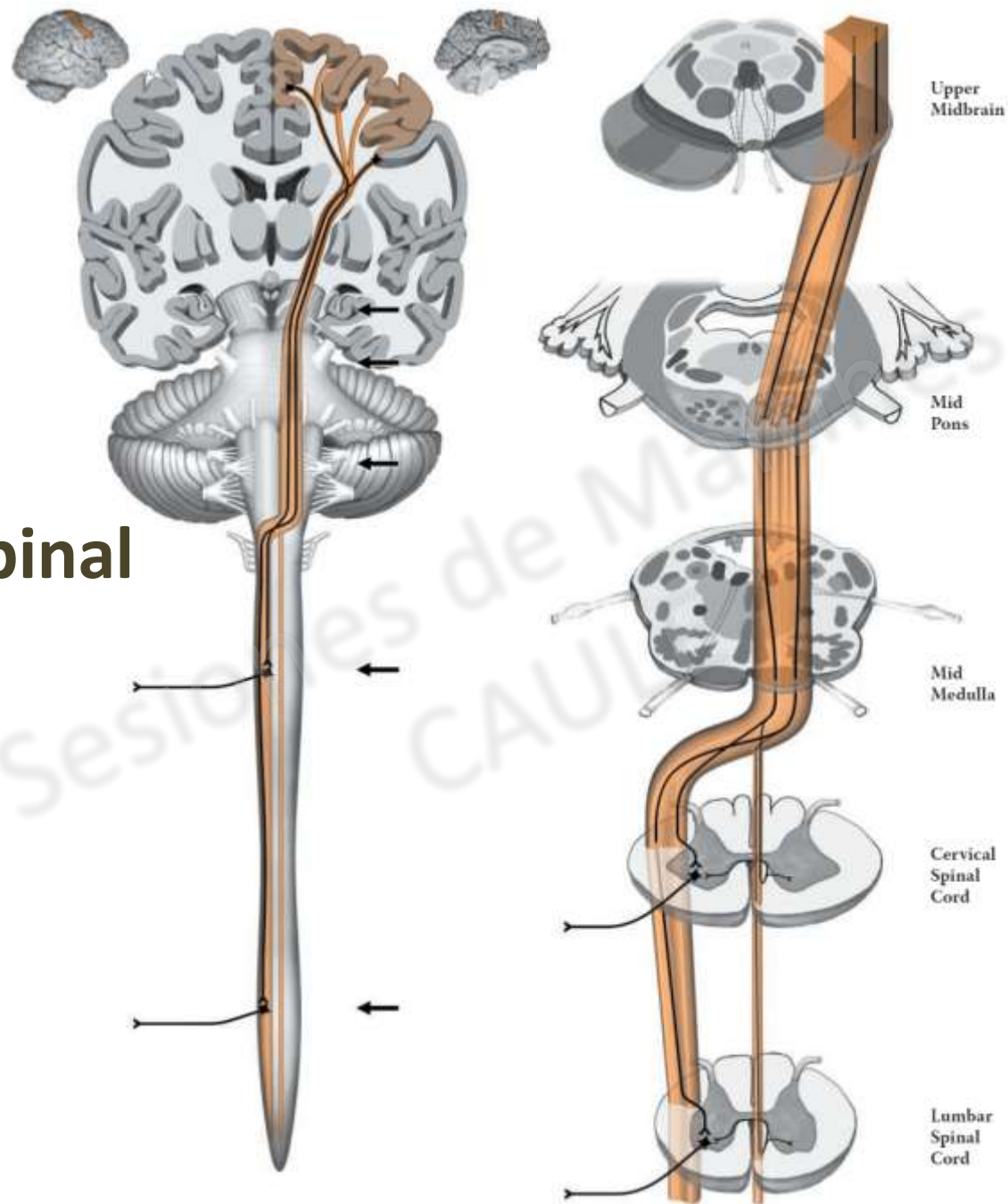
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Esclerosis solitaria PROGRESIVA

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Maitines, 8 de octubre de 2019

Haz corticoespinal



Esclerosis múltiple: formas de evolución

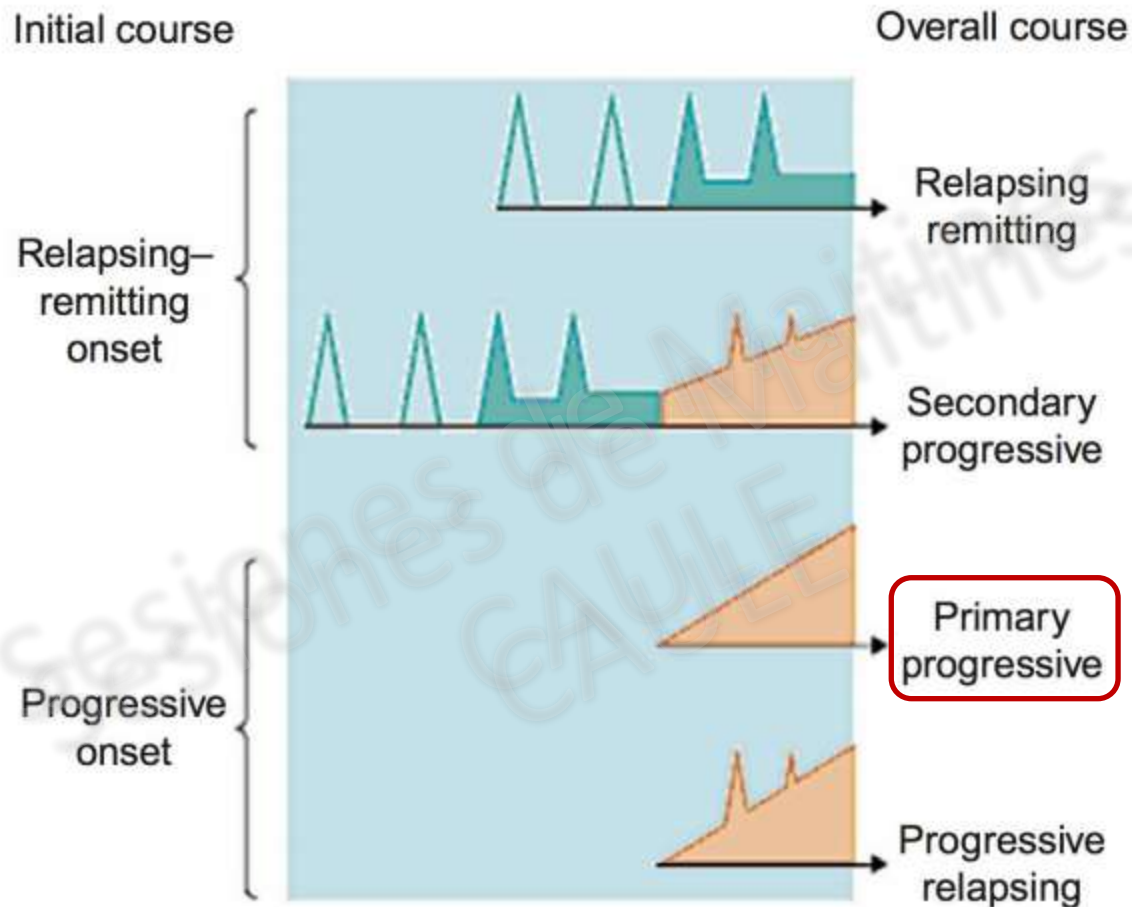


Fig. 15.3. Classification of the course of multiple sclerosis.
(Adapted from Lublin and Reingold, 1996.)

Solitary sclerosis

Progressive myelopathy from solitary demyelinating lesion

William F. Schmalstieg *Neurology*® 2012;78:540-544

Table 1 Clinical presentations

Patient	Sex	Age at onset of symptoms, y	Initial symptom	Disease course	Duration of progressive symptoms, y	EDSS score at last follow-up	Time to EDSS 6.0	Treatments
1	M	43	Progressive gait impairment	Progressive spastic quadriparesis	27	10.0 (deceased)	26 y	NA
2	F	49	Episode of left hemiparesis	Progressive spastic quadriparesis	11	6.0	11 y	NA
3	F	25	Transient left leg weakness	Progressive quadriparesis	4	9.0	15 y	IFN β , GA, MITX, IVMP
4	M	42	Progressive left leg weakness	Progressive quadriparesis	7	9.0	1.5 y	GA
5	M	49	Transient sensory symptoms in left leg	Progressive left hemiparesis	3	4.0	NA	NA
6	F	51	Subacute transverse myelitis	Progressive right hemiparesis	6	6.0	4 y	IVMP, CTX, AZA
7	F	37	Progressive gait impairment	Progressive quadriparesis	2	6.5	2 y	MITX, PLEX

2002



2008

Solitary sclerosis

Progressive myelopathy from solitary demyelinating lesion

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Table 2 Investigations

Patient	MRI lesion location	No. MRI scans ^a (range ^b)			Visual evoked potentials	Somatosensory evoked potentials	CSF	
		Brain	Cervical	Thoracic			Oligoclonal bands	IgG index
1	Right pontomesencephalic junction	1 (NA)	1 (NA)	0 (NA)	NP	NP	Positive	Elevated
2	Right cervical cord at C3	2 (80 mo)	2 (80 mo)	1 (NA)	Normal	NP	Positive	NP
3	Ventral cervicomedullary junction	1 (NA)	1 (NA)	1 (NA)	NP	NP	Unknown ^c	Unknown ^c
4	Ventral cervicomedullary junction	1 (NA)	1 (NA)	2 (3 mo)	Normal	Abnormal tibial	Positive	Elevated
5	Right ventral medulla	3 (48 mo)	3 (32 mo)	2 (29 mo)	Normal	Abnormal median and tibial	Positive	Normal
6	Cervical cord at C2	2 (14 mo)	3 (7 mo)	3 (7 mo)	Normal	NP	Negative	Normal
7	Ventral cervicomedullary junction	5 (24 mo)	6 (18 mo)	2 (8 mo)	NP	NP	Negative	Normal

2002



2008

Progressive solitary sclerosis

Gradual motor impairment from a single CNS demyelinating lesion

Revisión:

- 25 pacientes estudiados prospectivamente desde 1996 hasta 2016
- 5 pacientes reclutados retrospectivamente

Criterios de inclusión:

- Debilidad progresiva de al menos 1 año
- Lesión desmielinizante ÚNICA del SNC
- Sin historia de recaídas en otras localizaciones del SNC
- Exclusión de otras etiologías

Table Clinical, laboratory, and neuroimaging features of 30 patients with progressive solitary sclerosis

	No. (%) patients or median (range)
Demographics	
Age at onset, y	48.5 (23-71)
Female sex	15 (50)
Caucasian ethnicity ^a	24 of 26 (92)
Family history of MS in first-degree relative	4 (13)
Clinical syndrome	
Spastic (face-sparing) hemiparesis	16 (53)
Spastic monoparesis	8 (27)
Spastic quadriparesis	5 (17)
Spastic paraparesis	1 (3)
Follow-up and disability	
Time from symptom onset to last follow-up, mo	100 (15-343)
EDSS at last follow-up	6 (2-10)

Esclerosis solitaria

1. En 5 pacientes hubo una presentación aguda previa
2. 24 pacientes tenían una progresión unilateral
3. La mediana de los que llegaron a EDSS 6 fue de 47 meses
4. Había síntomas no motores en algunos enfermos
5. 4 pacientes tenían un familiar de primer grado con EM
6. 5 pacientes recibieron algún tratamiento, con poco éxito

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CSF findings

Elevated IgG index (>0.85) or oligoclonal bands (≥ 4)	13 of 26 (50)
Elevated leukocyte count ($>5/\mu\text{L}$)	2 of 24 (8); 9 (7-11)
Elevated protein ($>45\text{ mg/dL}$)	10 of 21 (48); 72 (54-108)

PEV
PEATC } Normales

Table Clinical, laboratory, and neuroimaging features of 30 patients with progressive solitary sclerosis

MRI lesion location	
Cervical spinal cord	18 (60)
Cervico-medullary junction	5 (17)
Thoracic spinal cord	4 (13)
Subcortical white matter	2 (7)
Pons-mesencephalic junction	1 (3)

Tamaño de la lesión. Mediana: 18 x 5,5 x 4 mm

Figure 1 MRI in patients with cervical spinal cord progressive solitary sclerosis

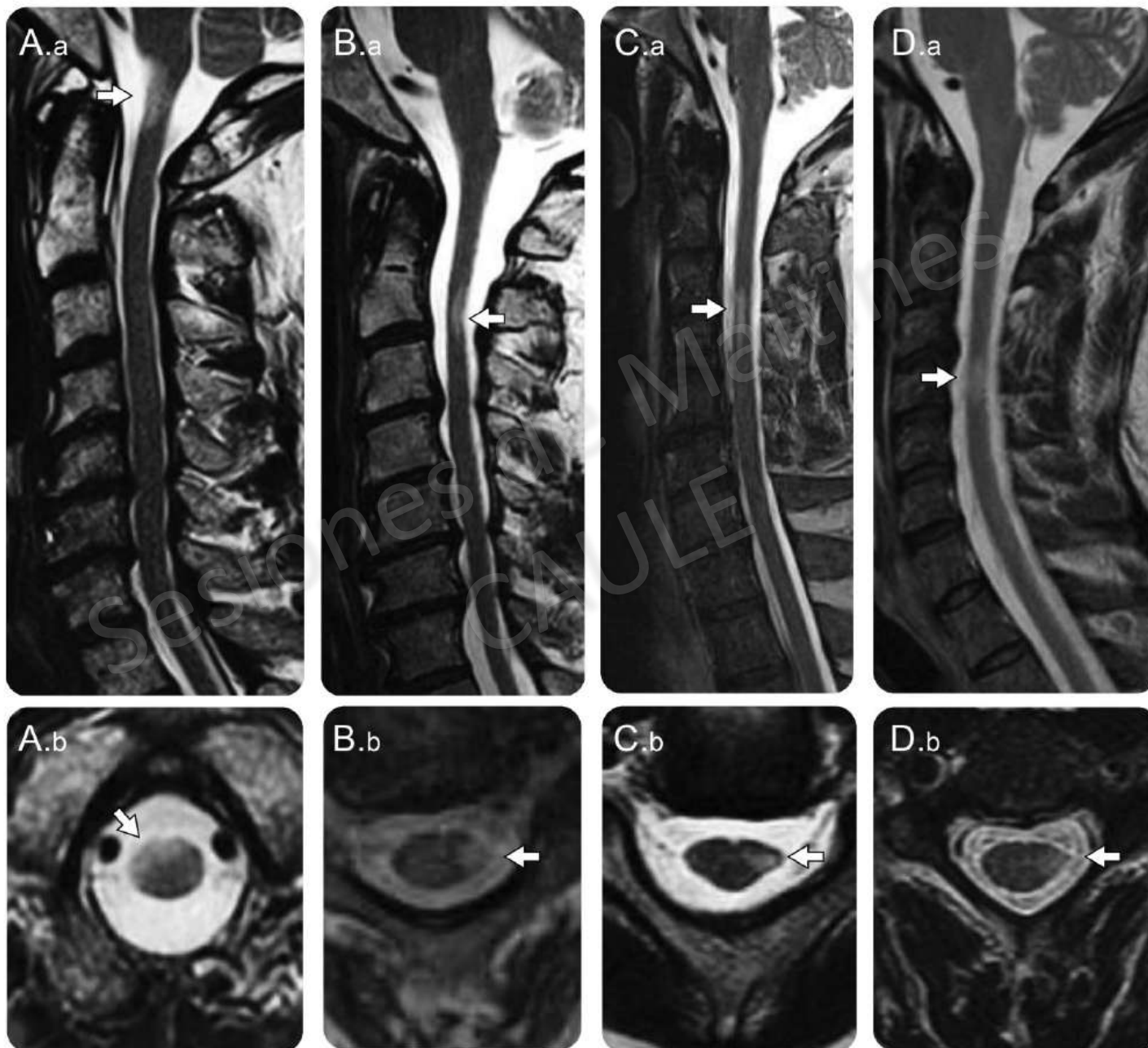
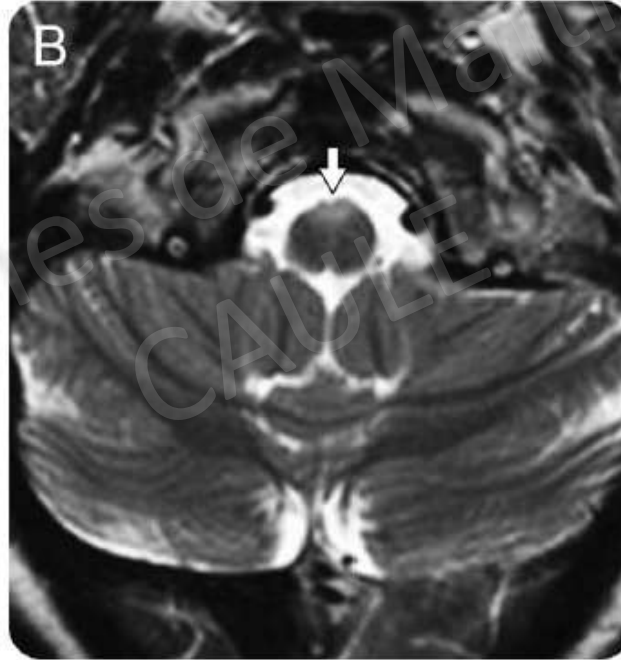


Figure 3

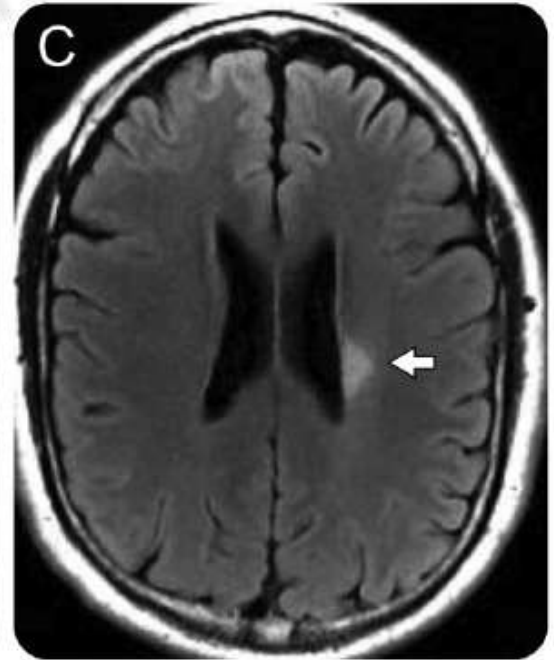
MRI in patients with brainstem and subcortical cerebral white matter progressive solitary sclerosis



Hemiparesia derecha



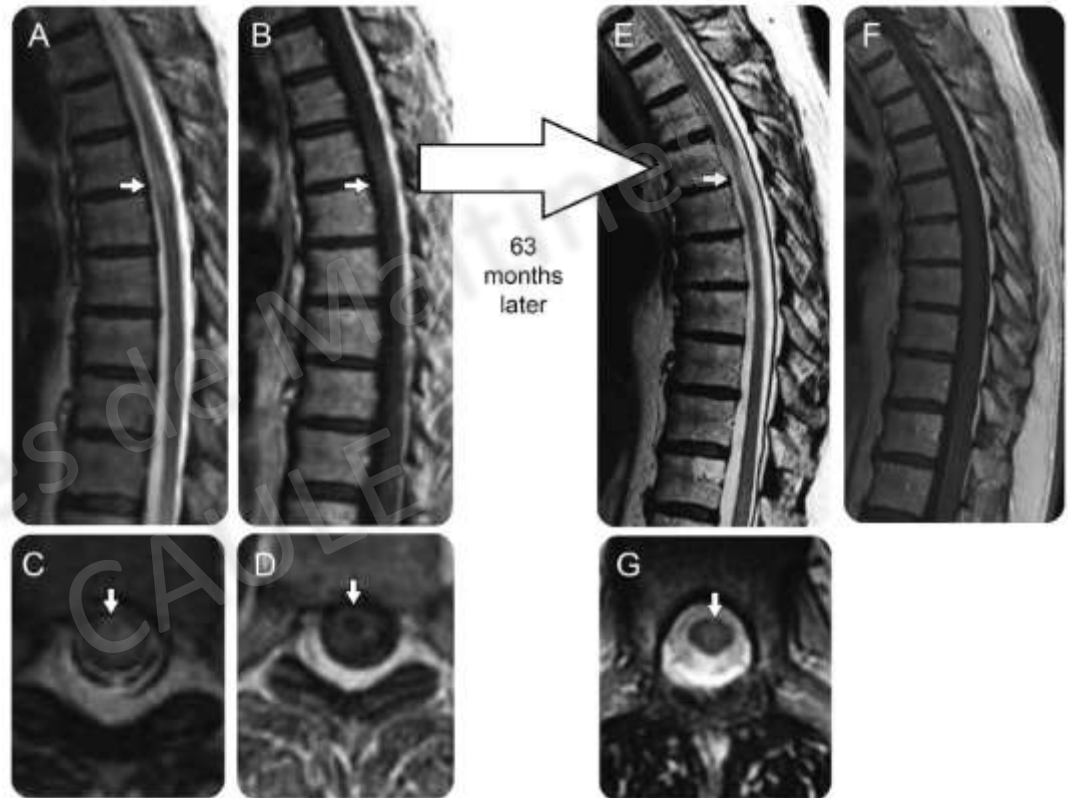
Tetraparesia espástica



Hemiparesia derecha

Esclerosis solitaria

1. Estudio de cráneo y raquis completo en 28 enfermos
2. 63 meses era la mediana entre la 1ª y última RM
3. Las lesiones en raquis ocupaban < 3 vértebras
4. 7% captaban gadolinio
5. Atrofia focal espinal en un 81%
6. Examen microscópico en 2 pacientes con desmielinización, inflamación y gliosis



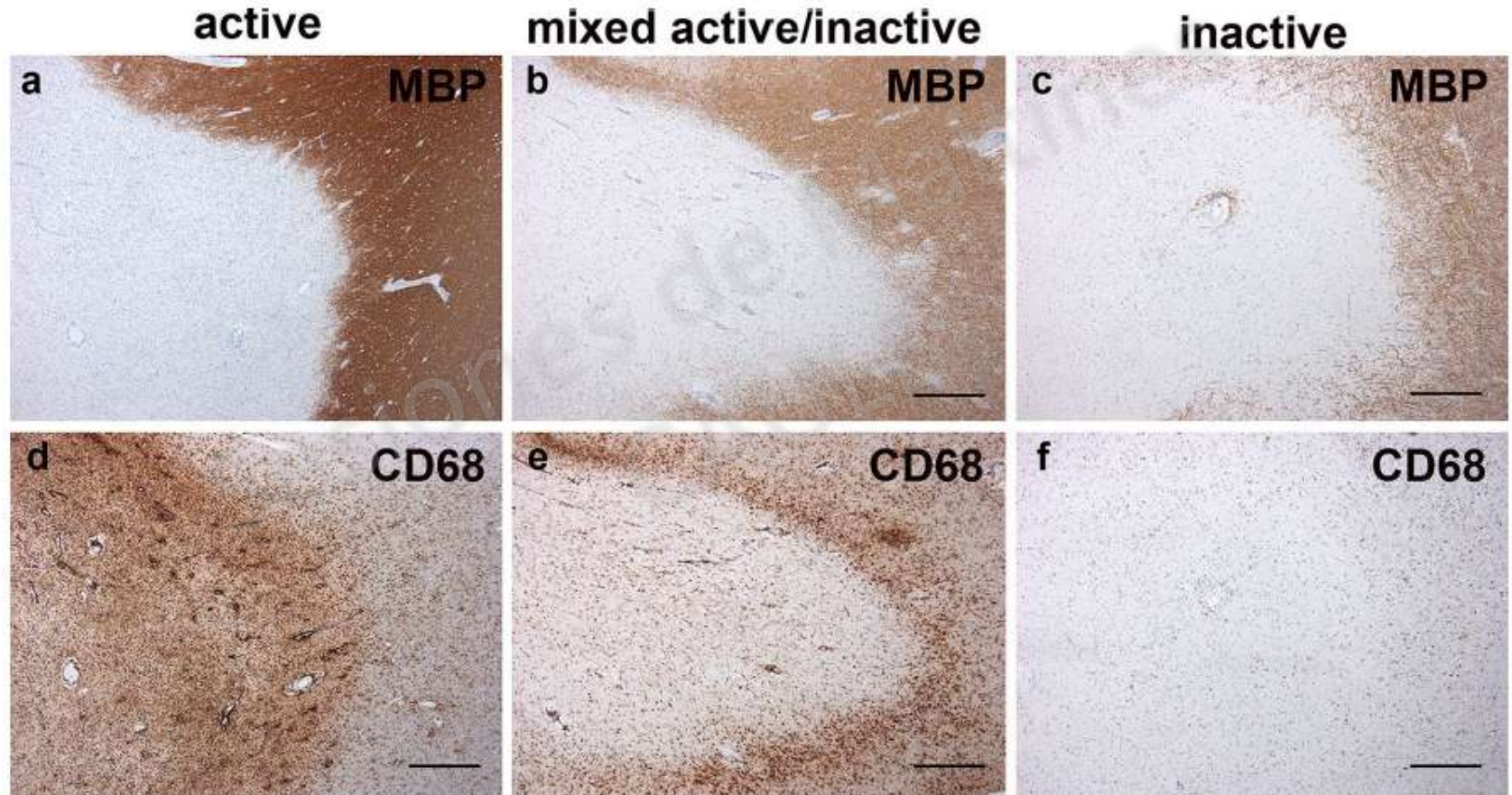
Mielitis que recupera

Paraparesia 3,5 años después

Central.

Gd+.

HISTOPATOLOGÍA



Esclerosis múltiple: formas de evolución

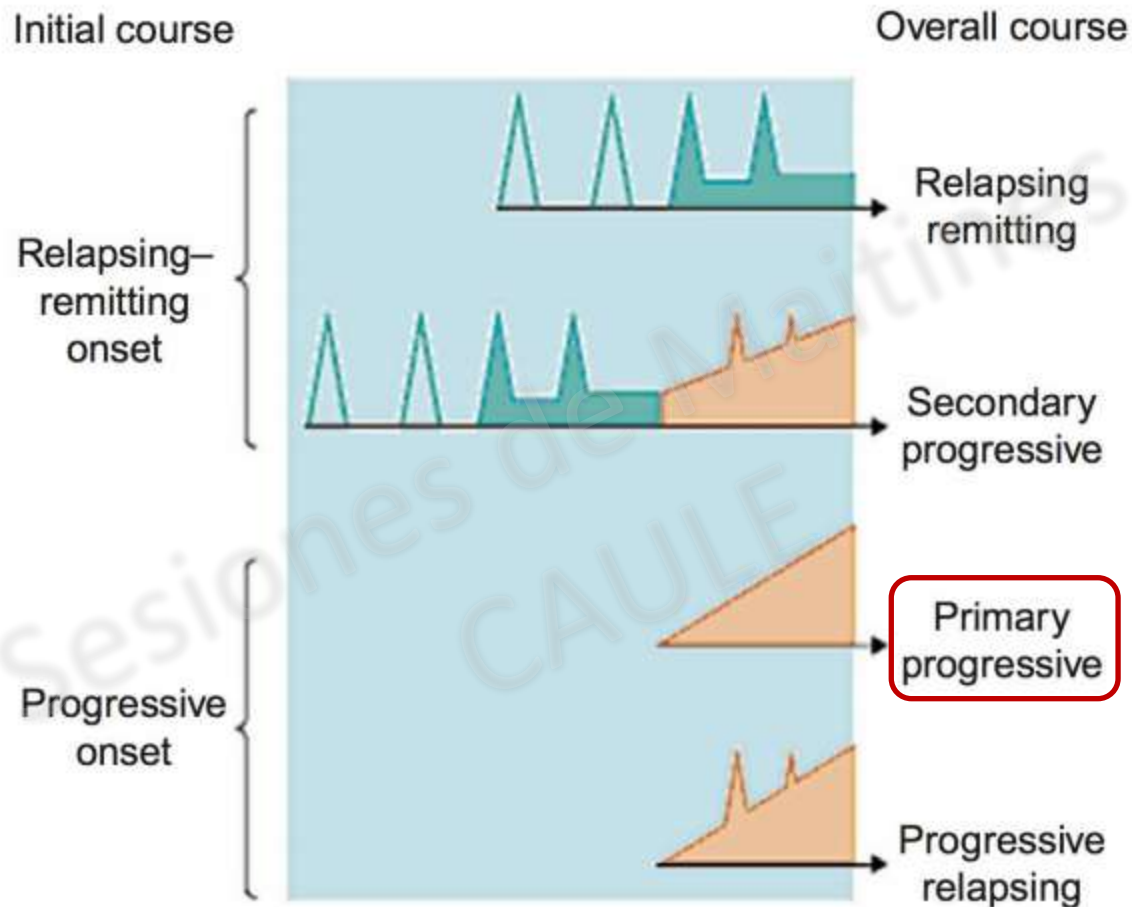


Fig. 15.3. Classification of the course of multiple sclerosis.
(Adapted from Lublin and Reingold, 1996.)

Semejanzas con algunas formas progresivas de EM

TABLE 3: 2010 McDonald Criteria for Diagnosis of MS in Disease with Progression from Onset

PPMS May Be Diagnosed in Subjects With:

1. One year of disease progression (retrospectively or prospectively determined)
2. Plus 2 of the 3 following criteria^a:
 - A. Evidence for DIS in the brain based on ≥ 1 T2^b lesions in at least 1 area characteristic for MS (periventricular, juxtacortical, or infratentorial)
 - B. Evidence for DIS in the spinal cord based on ≥ 2 T2^b lesions in the cord
 - C. Positive CSF (isoelectric focusing evidence of oligoclonal bands and/or elevated IgG index)

^aIf a subject has a brainstem or spinal cord syndrome, all symptomatic lesions are excluded from the Criteria.

^bGadolinium enhancement of lesions is not required.

MS = multiple sclerosis; PPMS = primary progressive MS; DIS = lesion dissemination in space; CSF = cerebrospinal fluid; IgG = immunoglobulin G.

Panel 6: 2017 McDonald criteria for diagnosis of multiple sclerosis in patients with a disease course characterised by progression from onset (primary progressive multiple sclerosis)

Primary progressive multiple sclerosis can be diagnosed in patients with:

- 1 year of disability progression (retrospectively or prospectively determined) independent of clinical relapse

Plus two of the following criteria:

- One or more T2-hyperintense lesions* characteristic of multiple sclerosis in one or more of the following brain regions: periventricular, cortical or juxtacortical, or infratentorial
- Two or more T2-hyperintense lesions* in the spinal cord
- Presence of CSF-specific oligoclonal bands

*Unlike the 2010 McDonald criteria, no distinction between symptomatic and asymptomatic MRI lesions is required.

Diagnosis of multiple sclerosis: 2017 revisions of the McDonald criteria

Lancet Neurol 2017

Solitary sclerosis

The Panel discussed rare patients who have an inflammatory lesion of the cerebral white matter, cervicomedullary junction, or spinal cord who develop progressive disability that is clinically indistinguishable from progressive forms of multiple sclerosis and who might have CSF-specific oligoclonal bands but have no clinical or radiological evidence of new lesion formation—a condition that has been termed progressive solitary sclerosis.⁹⁴ The Panel agreed that despite a progressive course, such patients do not satisfy the McDonald criteria for multiple sclerosis, because they do not have DIS. Like radiologically isolated syndrome, solitary sclerosis was identified as a high-priority area for further research.



A considerar también

NMO

TABLE 3. Revised Diagnostic Criteria for Neuromyelitis Optica (2006)

Definite NMO

Optic neuritis

Acute myelitis

At least 2 of 3 supportive criteria

Contiguous spinal cord MRI lesion extending over ≥ 3 vertebral segments

Onset brain MRI not meeting diagnostic criteria for MS

NMO-IgG seropositive status

NMOSD

Table 4. Neuromyelitis optica spectrum diseases – diagnostic criteria/recommendations

Diagnostic criteria for NMOSD with AQP4-IgG

1. At least one clinical core characteristic
2. Presence of AQP4-IgG using cell-based assay
3. Exclusion of other causes

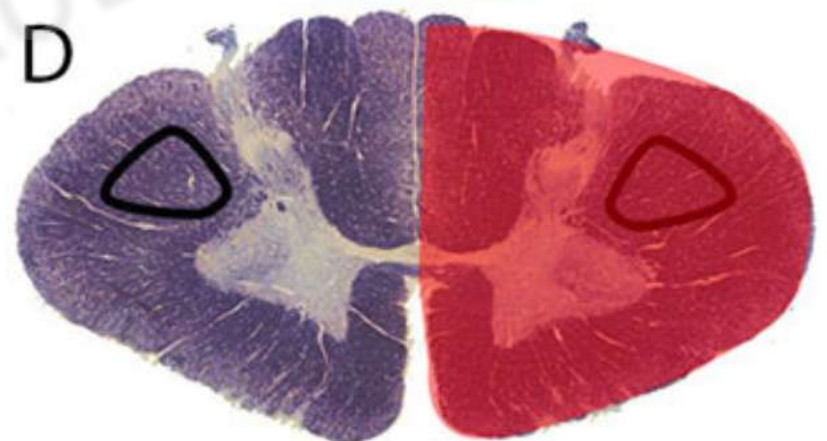
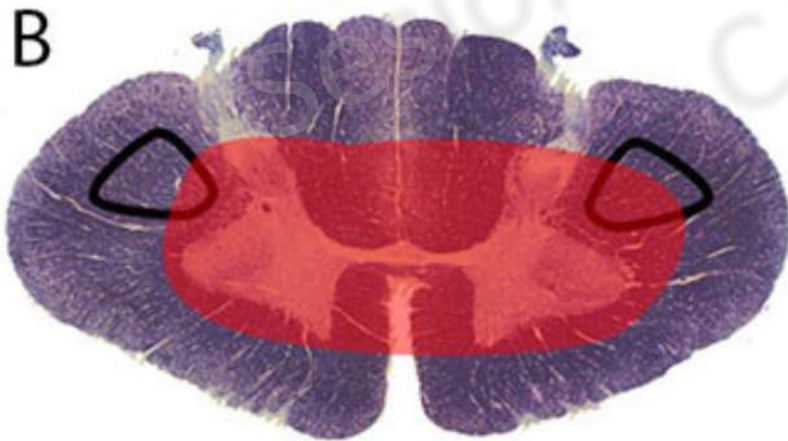
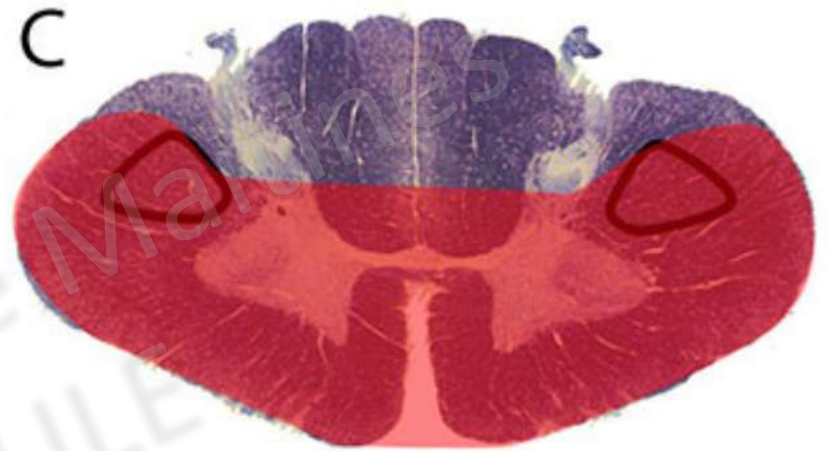
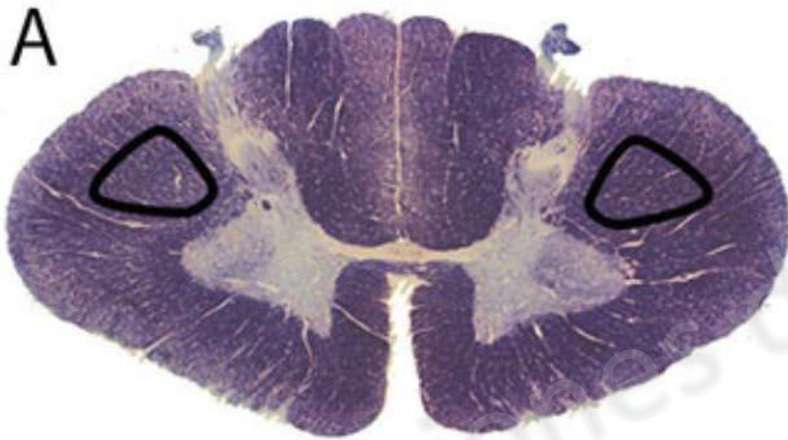
Diagnostic criteria for NMOSD without AQP4-IgG or NMOSD without known AQP4-IgG status

1. At least 2 clinical core characteristic as a result of one or more clinical attacks and meeting all of the following requirements:
 - a. At least one clinical core characteristic must be optic neuritis, acute myelitis with longitudinal extensive transverse myelitis, or area postrema syndrome
 - b. Dissemination in space (two or more different core clinical characteristics)
 - c. Fulfillment of additional MRI requirements
2. Negative tests for AQP4-IgG using best available assay, preferably cell-based
3. Exclusion of alternative diagnoses

Core clinical characteristics

1. Optic neuritis
2. Acute myelitis
3. Area postrema syndrome
4. Acute brainstem syndrome
5. Symptomatic narcolepsy or acute diencephalic clinical syndrome with NMOSD-typical brain lesions
6. Symptomatic cerebral syndrome with NMOSD-typical brain lesions

¿Mecanismo?



Gracias por vuestra atención

Se abre el turno de comentarios, preguntas,.....