POLIANGEITIS GRANULOMATOSA (GPA) DE WEGENER

¿cómo se presenta?
Afectación del SNC

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R5 Medicina Interna

Conflicto de interes:

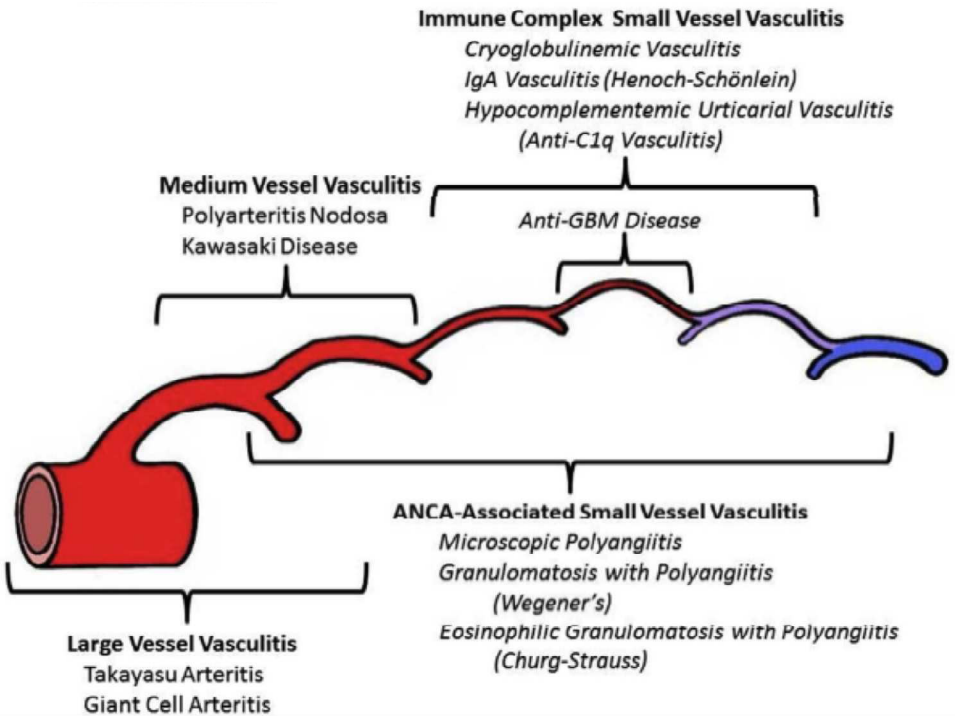
Nada que declarar

1. INTRODUCCION

2. MODELOS DE LESIÓN Y CORRELACIÓN RADIOLÓGICA

3. FENOTIPOS

4. ESTRATEGIAS TERAPEUTICAS. SEGUIMIENTO



2012 Revised International Chapel Hill Consensus Conference Nomenclature of Vasculitides
Jennette JC et al. Arthritis & Rheumatism Arthritis & Rheumatism Accepted: Sep 18, 2012

GPA

Inflamación granulomatosa necrotizante con tropismo de vías respiratorias altas y bajas.

Vasculitis necrotizante de pequeño vaso a vaso mediano (capilar, vénula, arteriola, arterias y venas).

1.Glomerulonefritis necrotizante: *común*
2.Vasculitis ocular y capilaritis pulmonar con hemorragia: *frecuente*
3.Inflamación granulomatosa y no granulomatosa extravascular: *común.*

Afectación neurológica en GPA

VASCULITIS ACTIVITY SCORE

○Tick box **only** if abnormality is **newly present** since last assessment or **worse** in the last **few weeks** (use the Vasculitis Damage Index, VDI to score items of damage)
–Tick box **only** if abnormality is due to **active** (but not new or worse) vasculitis
◊ Tick box if more information (specialist opinion/tests) is requested
* oral/axillary temperatures; rectal temperatures are 0.5°C higher

DEMOGRAPHY
Trial Number
Visit Date / /
Investigator

	PERSISTENT	NEW/WORSE
1. GENERAL	☐ (none)	
malaise	☐	○
myalgia	☐	○
arthralgia/arthritis	☐	○
headache	☐	○
fever (< 38.5°C)*	☐	○
fever (≥ 38.5°C)*	☐	○
wt loss (> 2kg)	☐	○
2. CUTANEOUS	☐ (none)	
infarct	☐	○
purpura	☐	○
other skin vasculitis	☐	○
ulcer	☐	○
gangrene	☐	○
multiple digit gangrene	☐	○
3. MUCOUS MEMBRANES/EYES	☐ (none)	
mouth ulcers	☐	○
genital ulcers	☐	○
significant proptosis	☐	○
red eye- conjunctivitis	☐	○
red eye- episcleritis	☐	○
blurred vision	☐	○
sudden visual loss	☐	○
ophthalmic opinion		◊
no active vasculitis		○
uveitis		○
retinal exudates		○
retinal haemorrhage		○
4. ENT	☐ (none)	
Nasal obstruction	☐	○
Bloody nasal discharge	☐	○
Nasal crusting	☐	○
Sinus involvement	☐	○
Hearing loss	☐	○
Hoarseness/stridor	☐	○
ENT opinion		◊
no active vasculitis		○
Granulomatous sinusitis		○
Conductive hearing loss		○
Sensorineural hearing loss		○
Significant Subglottic inflammation		○

	PERSISTENT	NEW/WORSE
5. CHEST	☐ (none)	
persistent cough	☐	○
dyspnoea or wheeze	☐	○
Haemoptysis/haemorrhage	☐	○
chest radiology performed		◊
no active vasculitis		○
nodules or cavities		○
pleural effusion/pleurisy		○
infiltrate		○
massive haemoptysis or alveolar haemorrhage	☐	○
respiratory failure	☐	○
6. CARDIOVASCULAR	☐ (none)	
aortic incompetence	☐	○
pericardial pain/rub	☐	○
ischaemic cardiac pain	☐	○
congestive cardiac failure	☐	○
cardiology opinion/tests		◊
no active vasculitis		○
pericarditis		○
myocardial infarct/angina		○
cardiomyopathy		○
7. ABDOMINAL	☐ (none)	
severe abdominal pain	☐	○
bloody diarrhoea	☐	○
surgical opinion/tests		◊
no active vasculitis		○
gut perforation/infarct		○
acute pancreatitis		○
8. RENAL	☐ (none)	
hypertension (diastol>95)	☐	○
proteinuria >1+/>0.2g/24h)	☐	○
haematuria>1+/>10rbc/ml)	☐	○
creatinine 125-249 umol/l		○
creatinine 250-499 umol/l		○
creatinine >500 umol/l		○
9. NERVOUS SYSTEM	☐ (none)	
organic confusion/dementia	☐	○
seizures(not hypertensive)	☐	○
stroke	☐	○
cord lesion	☐	○
sensory peripheral neuropathy	☐	○
cranial nerve palsy	☐	○
motor mononeuritis multiplex	☐	○

A Disease-Specific Activity Index for Wegener's Granulomatosis

Modification of the Birmingham Vasculitis Activity Score

	Persistent	New/Worse	None
6. GENERAL			△1
a. arthralgia/arthritis	□1	○2	
b. fever (≥38.0 °C)	□1	○2	
7. CUTANEOUS			△1
a. purpura	□1	○2	
b. skin ulcer	□1	○2	
c. * **gangrene**	□1	○2	
8. MUCOUS MEMBRANES/EYES			△1
a. mouth ulcers	□1	○2	
b. conjunctivitis/episcleritis	□1	○2	
c. retro-orbital mass/proptosis	□1	○2	
d. uveitis	□1	○2	
e. * **scleritis**	□1	○2	
f. * **retinal exudates/hemorrhage**	□1	○2	
9. EAR, NOSE & THROAT			△1
a. bloody nasal discharge/nasal crusting/ulcer	□1	○2	
b. sinus involvement	□1	○2	
c. swollen salivary gland	□1	○2	
d. subglottic inflammation	□1	○2	
e. conductive deafness	□1	○2	
f. * **sensorineural deafness**	□1	○2	
10. CARDIOVASCULAR			△1
a. pericarditis	□1	○2	
11. GASTROINTESTINAL			△1
a. * **mesenteric ischemia**	□1	○2	
12. PULMONARY			△1
a. pleurisy	□1	○2	
b. nodules or cavities	□1	○2	
c. other infiltrate secondary to WG	□1	○2	
d. endobronchial involvement	□1	○2	
e. * **alveolar hemorrhage**	□1	○2	
f. * **respiratory failure**	□1	○2	

	Persistent	New/Worse	None
13. RENAL			△1
a. hematuria (no RBC casts) (≥1+ or ≥10 RBC/hpf)	□1	○2	
b. * **RBC casts**	□1	○2	
c. * **rise in creatinine >30% *or* fall in creatinine clearance >25%**		○2	
score only the RBC casts (the major item).			
14. NERVOUS SYSTEM			
a. * **meningitis**	□1	○2	
b. * **cord lesion**		○2	
c. * **stroke**		○2	
d. * **cranial nerve palsy**		○2	
e. * **sensory peripheral neuropathy**		○2	
f. * **motor mononeuritis multiplex**		○2	
(describe all items and items deemed major)			
_____	□1	○2	
_____	□1	○2	
_____	□1	○2	
_____	□1	○2	

16. TOTAL NUMBER OF ITEMS:

a.	b.	c.	d.
___	___	___	___
Major New/Worse	Minor New/Worse	Major Persistent	Minor Persistent

DETERMINING DISEASE STATUS:

Severe Disease/Flare: ≥1 new/worse Major item.
Limited Disease/Flare: ≥1 new/worse Minor item.
Persistent Disease: Continued (but not new/worse) activity.
Remission: No active disease, including either new/worse or persistent items.

17. CURRENT DISEASE STATUS *(check only one)*:

Severe Disease/Flare (1)
Limited Disease/Flare (2)
Persistent Disease (3)
Remission (4)

18. PHYSICIAN'S GLOBAL ASSESSMENT (PGA)
Mark line to indicate the amount of WG disease activity (not including longstanding damage) within the **previous 28 days:**

Remission (0) ——— (10) **Maximum activity**

19. Value in item #18: ___ ___ ___ mm *(distance from 0 to tick mark in millimeters)*

A Disease-Specific Activity Index for Wegener's Granulomatosis

VASCULITIS ACTIVITY SCORE

Tick box **only** if abnormality is **newly present** since last assessment or **worse** in the

DEMOGRAPHY

9. NERVOUS SYSTEM ☐ (none)

- organic confusion/dementia
- seizures(not hypertensive)
- stroke
- cord lesion
- sensory peripheral neuropathy
- cranial nerve palsy
- motor mononeuritis multiplex

retinal haemorrhage

4. ENT ☐ (none)

- Nasal obstruction
- Bloody nasal discharge
- Nasal crusting
- Sinus involvement
- Hearing loss
- Hoarseness/stridor
- *ENT opinion*
- no active vasculitis
- Granulomatous sinusitis
- Conductive hearing loss
- Sensorineural hearing loss
- Significant Subglottic inflammation

gut perforation/infarct
acute pancreatitis

8. RENAL ☐ (none)

- hypertension (diastol>95)
- proteinuria >1+/>0.2g/24h)
- haematuria>1+/>10rbc/ml)
- creatinine 125-249 umol/l
- creatinine 250-499 umol/l
- creatinine >500 umol/l
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9. NERVOUS SYSTEM ☐ (none)

- organic confusion/dementia
- seizures(not hypertensive)
- stroke
- cord lesion
- sensory peripheral neuropathy
- cranial nerve palsy
- motor mononeuritis multiplex

Modification of the Birmingham Vasculitis Activity Score

	Persistent	New/Worse	None
g RBC casts)	☐1	○2	△1
) RBC/hpf)			
	☐1	○2	
atin >30% *or*		○2	
atin clearance >25%			
atur and RBC casts are present,			
he R casts (the major item).			
(ST 1	☐1	○2	△1
		○2	
s		○2	
rve sy		○2	
ripl al neuropathy		○2	
ion itis multiplex		○2	
ems d * items deemed major)			△1
	☐1	○2	
	☐1	○2	
	☐1	○2	
	☐1	○2	

BE OF ITEMS:

b. c. d.

	Major New/Worse	Minor New/Worse	Major Persistent	Minor Persistent
d. endobronchial involvement	☐1	○2		
e. * **alveolar hemorrhage**	☐1	○2		
f. * **respiratory failure**	☐1	○2		

DETERMINING DISEASE STATUS:

Severe Disease/Flare: ≥1 new/worse Major item.
Limited Disease/Flare: ≥1 new/worse Minor item.
Persistent Disease: Continued (but not new/worse) activity.
Remission: No active disease, including either new/worse or persistent items.

17. CURRENT DISEASE STATUS *(check only one)*:

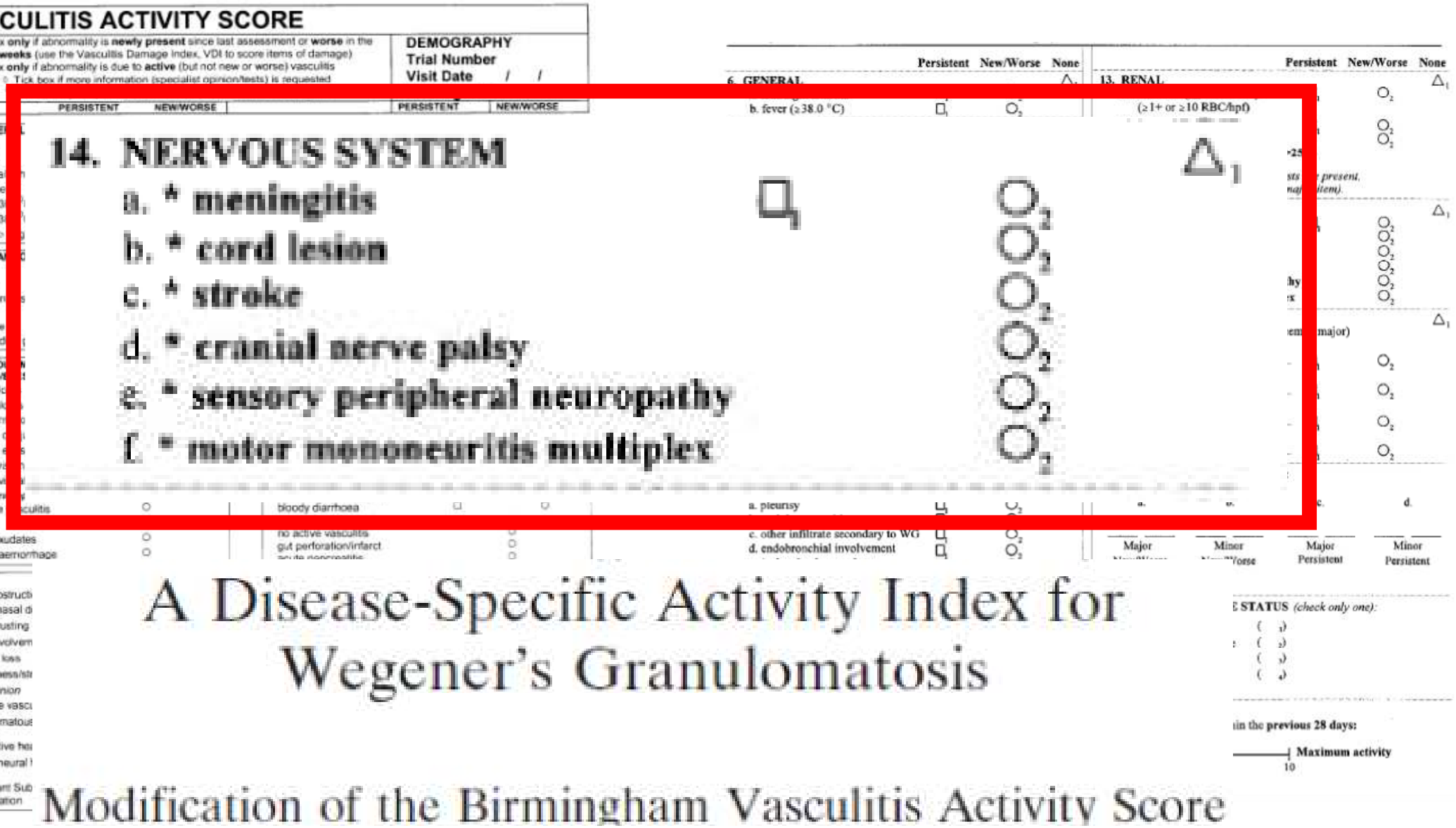
- Severe Disease/Flare (1)
- Limited Disease/Flare (2)
- Persistent Disease (3)
- Remission (4)

18. PHYSICIAN'S GLOBAL ASSESSMENT (PGA)

Mark line to indicate the amount of WG disease activity (not including longstanding damage) within the **previous 28 days:**

Remission 0 —— 10 **Maximum activity**

19. Value in item #18: ___ ___ ___ mm *(distance from 0 to tick mark in millimeters)*


VASCULITIS ACTIVITY SCORE
DEMOGRAPHY
Trial Number
Visit Date / /
PERSISTENT NEW/WORSE
14. NERVOUS SYSTEM
a. * meningitis
b. * cord lesion
c. * stroke
d. * cranial nerve palsy
e. * sensory peripheral neuropathy
f. * motor mononeuritis multiplex
Persistent New/Worse None
13. RENAL
Major Minor Major Minor
Persistent Persistent
A Disease-Specific Activity Index for
Wegener's Granulomatosis
Modification of the Birmingham Vasculitis Activity Score

Afectación neurológica en GPA

Afectación frecuente (22-54%) :

- **Sistema nervioso periférico y SNC**
- Condición más frecuentemente descrita: **neuropatía periférica como mononeuritis múltiple.**

La afectación del SNC es extremadamente rara si no incluimos PN (lesión de pares craneales):

- **Pares craneales se afectan predominantemente a lo largo del trayecto extracraneal.**

Afectación **cerebral y meníngea**

- Excepcional ocurriendo solamente del **2-8%** de los pacientes.

*Drachman et al (1963)
*Anderson et al (1975)
*Fauci et al (1983) *Seror et al (2006)

French Vasculitis Study Group (FVSG)

FFS 1996

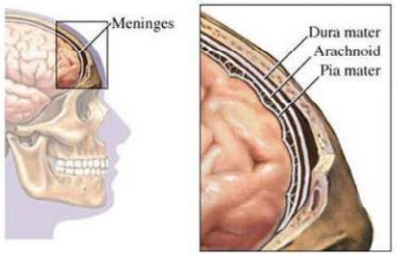
1. Proteinuria >1 g/dL
2. Renal insufficiency (stabilized peak creatinine 140 mmol/L)
3. Cardiomyopathy
4. Severe gastrointestinal manifestations
5. **Central nervous system (CNS) involvement**

Changes in the 2009 FFS

*To include GPA to evaluate prognosis at diagnosis
*Absence of CNS involvement as a parameter of poor prognosis

The Five-Factor Score Revisited
Assessment of Prognoses of Systemic Necrotizing Vasculitides Based on the French Vasculitis Study Group (FVSG) Cohort .
Guillevin et al. Medicine & Volume 90, Number 1, January 2011

Tres modelos de lesión :



1) **Vasculitis** de pequeño calibre cerebrales o medulares.

2) **Masas granulomatosas** originarias del tracto superior respiratorio cartilaginoso y óseo contiguo, invadiendo estructuras del SNC como la órbita (afectación del nervio óptico), meninges o cerebro.

3) **Lesiones granulomatosas** cerebrales o meníngeas (paquimeningitis y lesiones aisladas).

Central Nervous System Involvement in Wegener Granulomatosis
Raphaele Seror, MD, Loıc Guillevin, MD.Medicine.Volume 85, Number 1, January 2006

MODELOS RADIOLÓGICOS DE AFECTACIÓN SNC EN GPA

Pachymeningitis (cerebral and/or medullary)

- ❏ Diffuse linear dural thickening and enhancement.
- ❏ Focal dural thickening and enhancement contiguous with orbital, nasal, or paranasal disease.
- ❏ Enlarged and enhancement of pituitary gland with infundibular thickening.

Granuloma

- ❏ Remote granulomatous lesions in brain or medullar parenchyma

Ischemic or hemorrhagic lesions due to vasculitis damage

- ❏ Infarcts (stroke) : ischemic or hemorrhagic
- ❏ Nonspecific white matter areas of high signal intensity
- ❏ Cerebral Vaculitides

Wegener Granulomatosis: MR Imaging Findings in Brain and Meninges.
Joseph M. Murphy. Radiology 1999; 213:794–799
Sinonasal and cerebral imaging findings in Wegener's granulomatosis
Silvera et al. Presse Md 2007 ; 36:913-21

574 GPA Medicina Interna Cochin/Avicenne

Búsqueda de afectación SNC

16 GPA (3%) afectación SNC

558 GPA no afectación SNC

Afectación del SNC

Paquimeningitis medular y cerebral.

Meningitis aseptica

AVC Isquémico y/o hemorrágico.

Granuloma medulares/cerebrales

Afectación hipofisaria

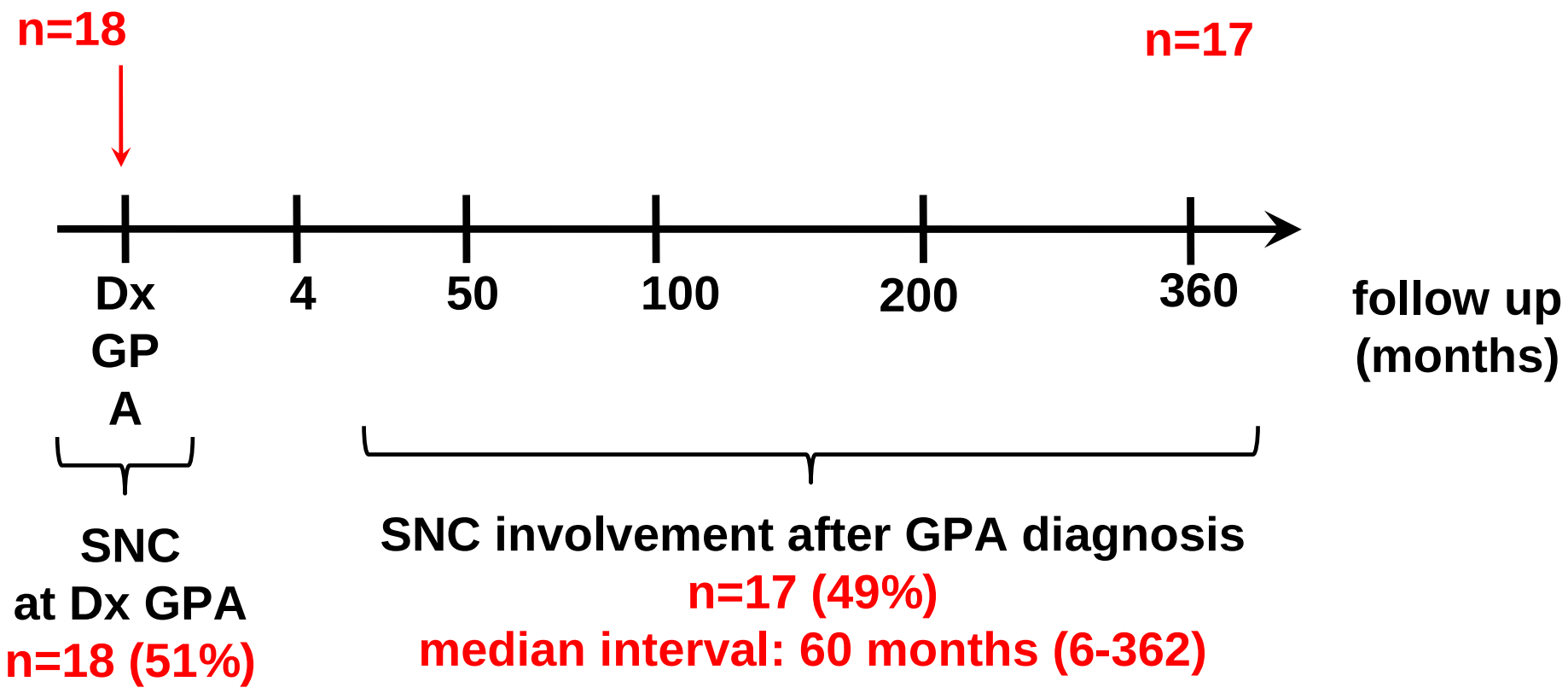
Criterios de inclusión GPA:
criterio ACR y/o
criterio Chapel Hill.

Granulomatose avec polyangéite : profil clinico-biologique et évolutif des atteintes du système nerveux central chez 16 patients.
De Luna G. , Guillevin L. Rev Med Int 2012. 33:2 (A1-A210) *

Treinta cinco observaciones **(n=35)** recogidas desde 7 departamentos de Medicina Interna incluyendo 6 en Francia y 1 en España.

*

Afectación de SNC y GPA



*

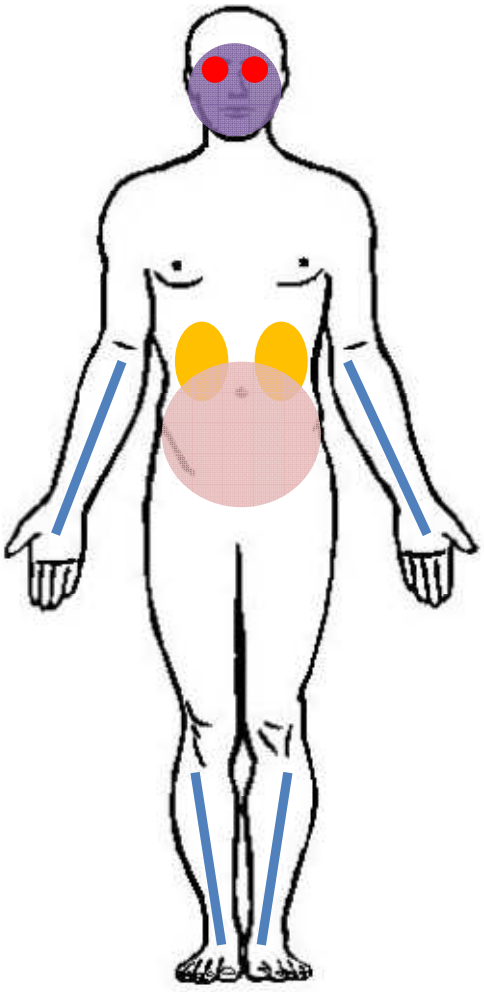
Carasterísticas clínicas

Epidemiology

Age: 48 (2-78) years (GAP)
51 (2-79) years (SNC)

Male : 29/35 (83%)

ENT n=28 (80%)	LUNG n=20 (57%)
SNP n=17 (48%)	RENAL n=14 (40%)
OPHT n=5 (33%)	DIGESTIVE n=2 (11%)



Sintomas clínicos

CNS symptoms	n (%)
Headaches	23 (65 %)
Sensory impairment	15 (43 %)
Motor impairment	11 (31 %)
Vestibular syndrome	8 (23 %)
Hearing loss	8 (23 %)
Psychiatric/mood disorders	3 (8 %)
Diabetes insipidus	2 (6 %)

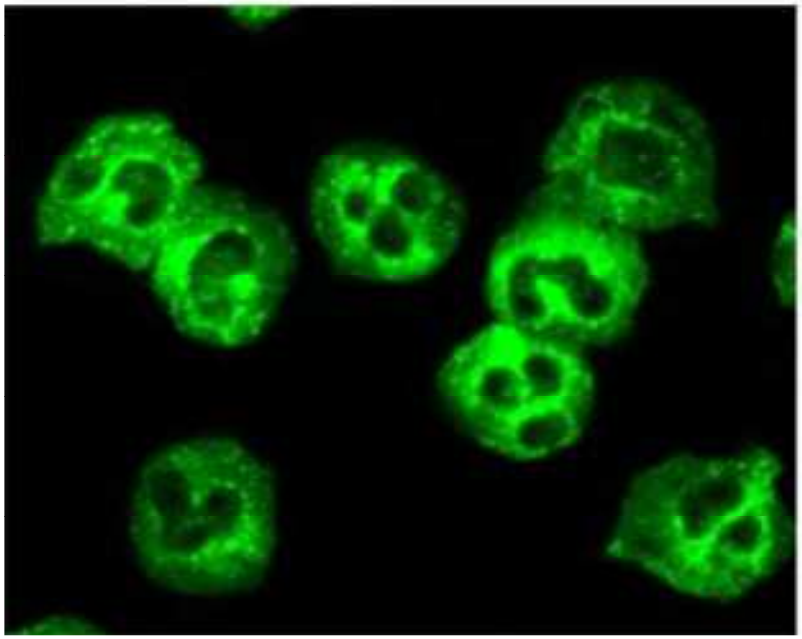
*

Características Inmunológicas

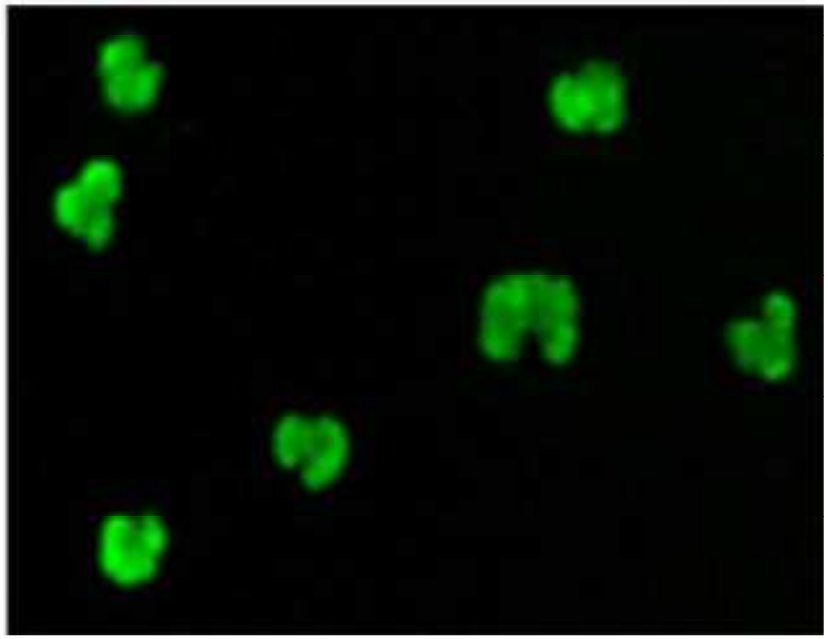
Immunology

ANCA positive in 31/35 (89%)

Anti-PR3: 26/35 (84%)



Anti-MPO: 5/35 (16%)



Líquido cefaloraquídeo

Lumbar ponction	n (%)
n=19	54
Normal	7 (37%)
Abnormal	12 (63%)
Protein level >0,40 g/L	8 (67%)
Lymphocyte (cell count)	6 (50%)
Low glucose level	3 (25%)

*

Carasterísticas Radiológicas

Images TDM/IRM	n (%)
Cerebral pachymeningitis	16 (46 %)
Ischemic stroke and multi infarct areas	15 (43 %)
Cerebral vasculitides	7 (20 %)
Medullar pachymeningitis	4 (11 %)
Hypophyseal involvement	2 (6 %)
Hemorrhagic stroke	2 (6 %)
Isolated granuloma (cererbal)	1 (3 %)
Isolated granuloma (medullar)	1 (3 %)

*

Fenotipos clínico-radiológico

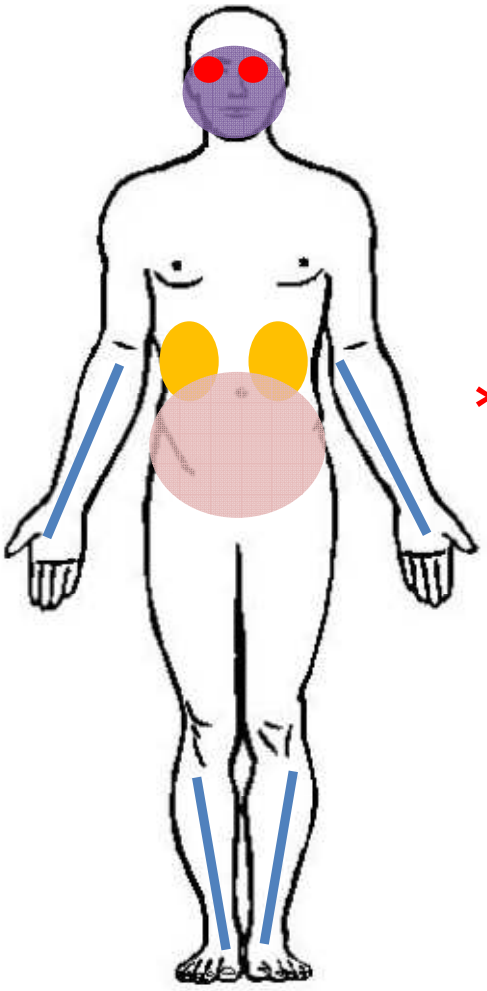
Granulomatous n=20	**57%**
Cerebral pachymeningitis	16 (80%)
Medullary pachymeningitis	3 (15%)
Hypophyseal involvement	2 (10%)
Isolated granuloma (cererbal and medullar)	0*
Vascular n=13	**37%**
Ischemic stroke (62%)	8
Cerebral vasculitides	6 (46%)
White matter areas of high signal intensity	5 (38%)
Hemorrhagic stroke	0*

*

Carasterísticas clínicas: fenotipos

Vascular (V)
Granuloma (G)

ENT 77% (V) Vs 85% (G)	**LUNG** 54% (V) Vs 55% (G)
SNP 38% (V) Vs 55% (G)	**RENAL** 69% (V) Vs 20% (G) *
OPHT 31% (V) Vs 35% (G)	**DIGESTIVE** 15% (V) Vs 10% (G)



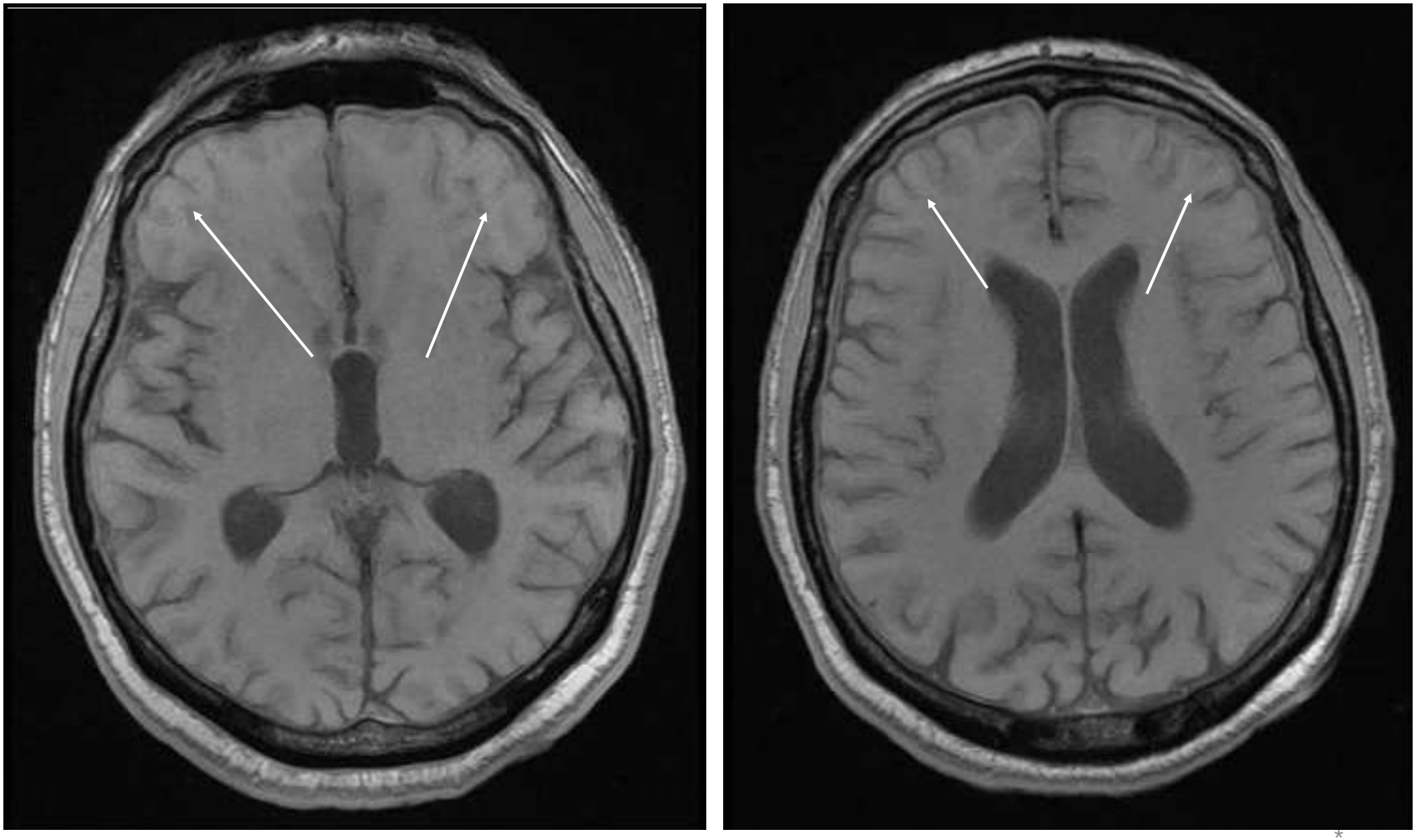
*p=0,01

Sintomas clínicos

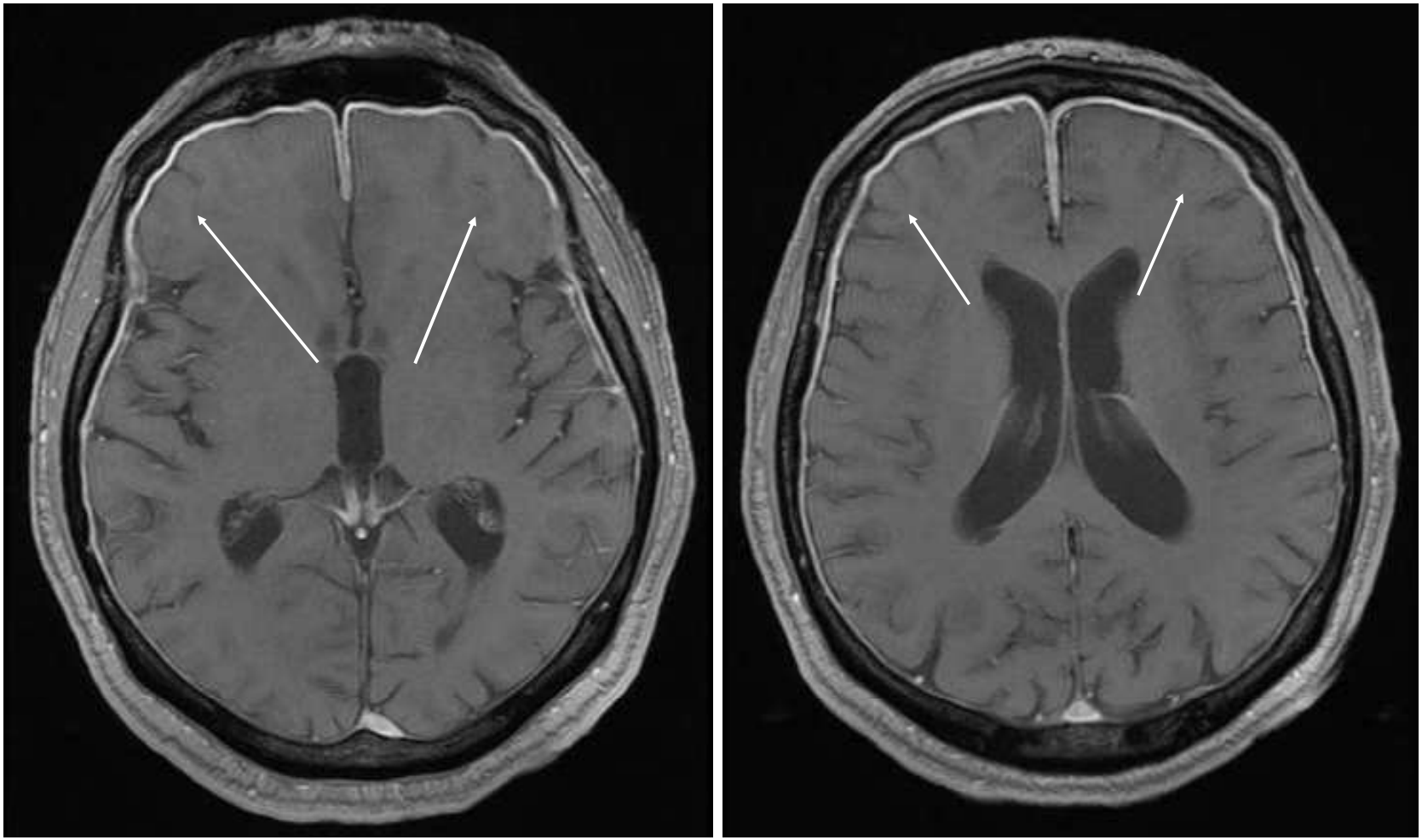
CNS symptoms	Granulome	Vascular	p
Headaches	19 (95 %)	4 (31%)	0,0002
Sensory impairment	10 (50 %)	5 (38%)	0,72
Motor impairment	1 (5 %)	9 (69%)	0,0002
Vestibular syndrome	4 (24 %)	3 (23%)	1
Hearing loss	7 (33 %)	1 (8%)	0,12
Psyquiatric/mood disorders	0 (0 %)	3 (23%)	0,005
Diabetes insipidus	2 (10 %)	0 (0%)	0,51

*

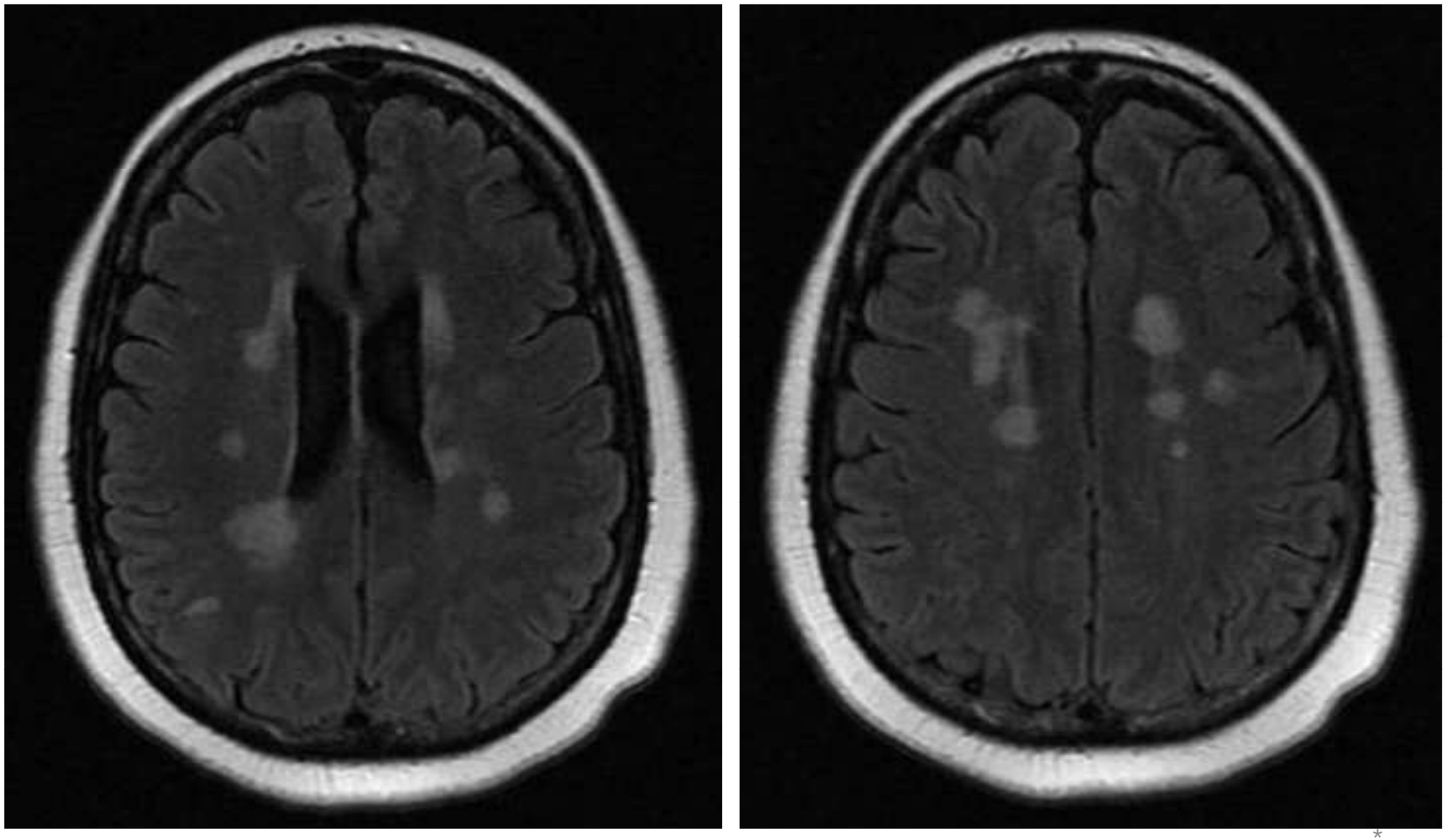
Engrosamiento linear difuso de duramadre (FLAIR)



Realce linear difuso de duramadre (GADOLINIUM)



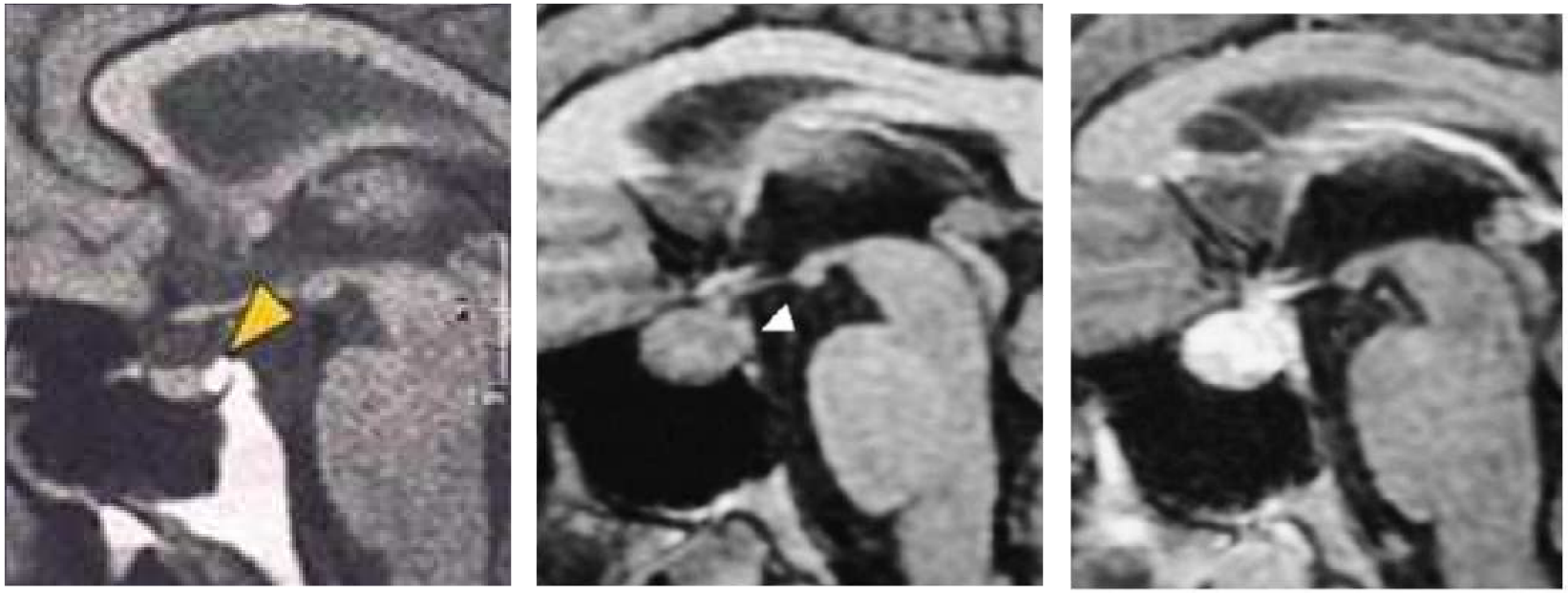
Múltiples áreas de hiperintensidad de señal substancia blanca (T2)



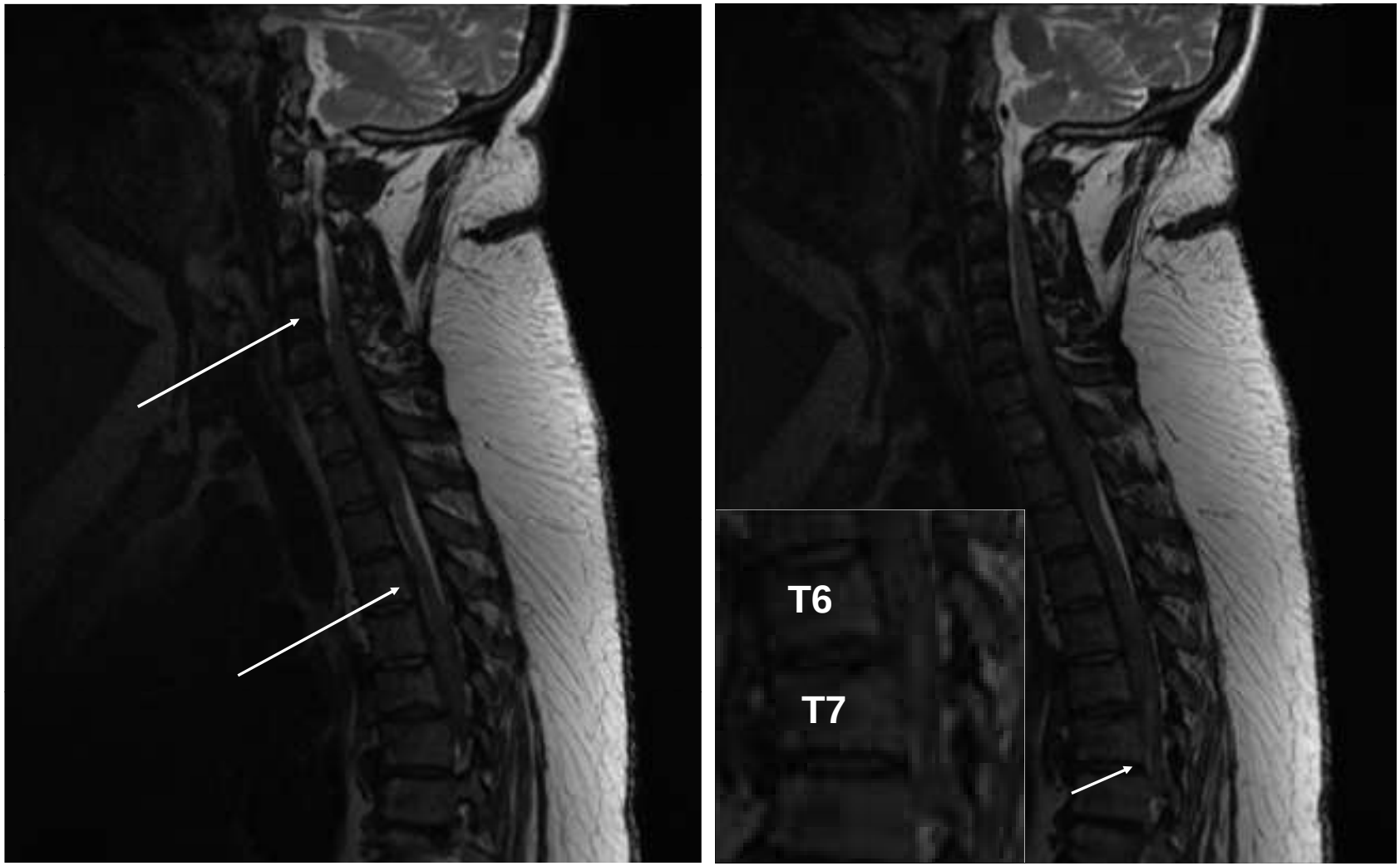
Aumento y realce de glandula pituitaria con engrosamiento infundibular.

Control **GPA**

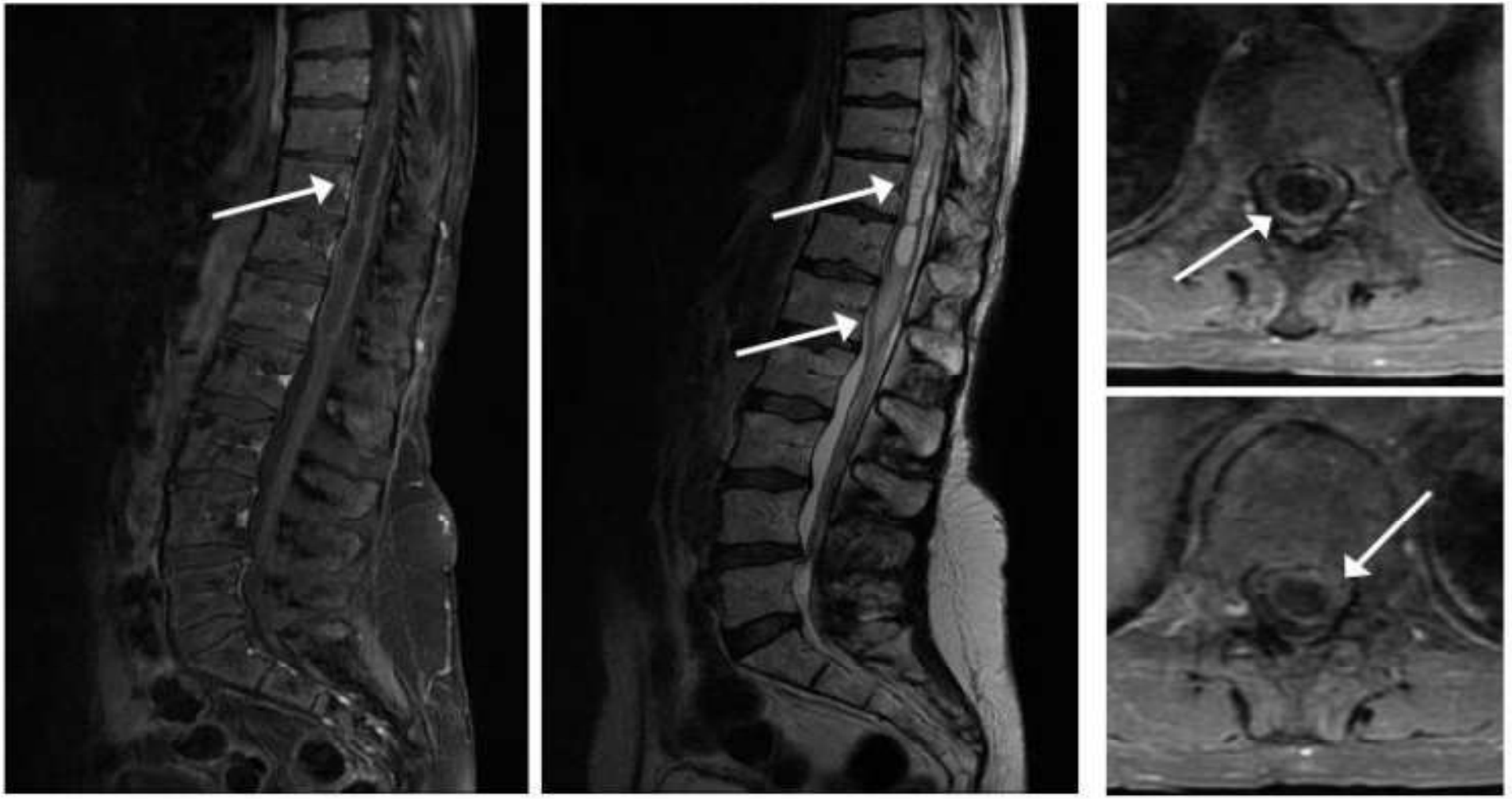
T1 **T1** **T1 + gadolinium**



Paquimeningitis medular e hiperseñal (T2)



Lesión granulomatosa intradural (GADOLINIUM)

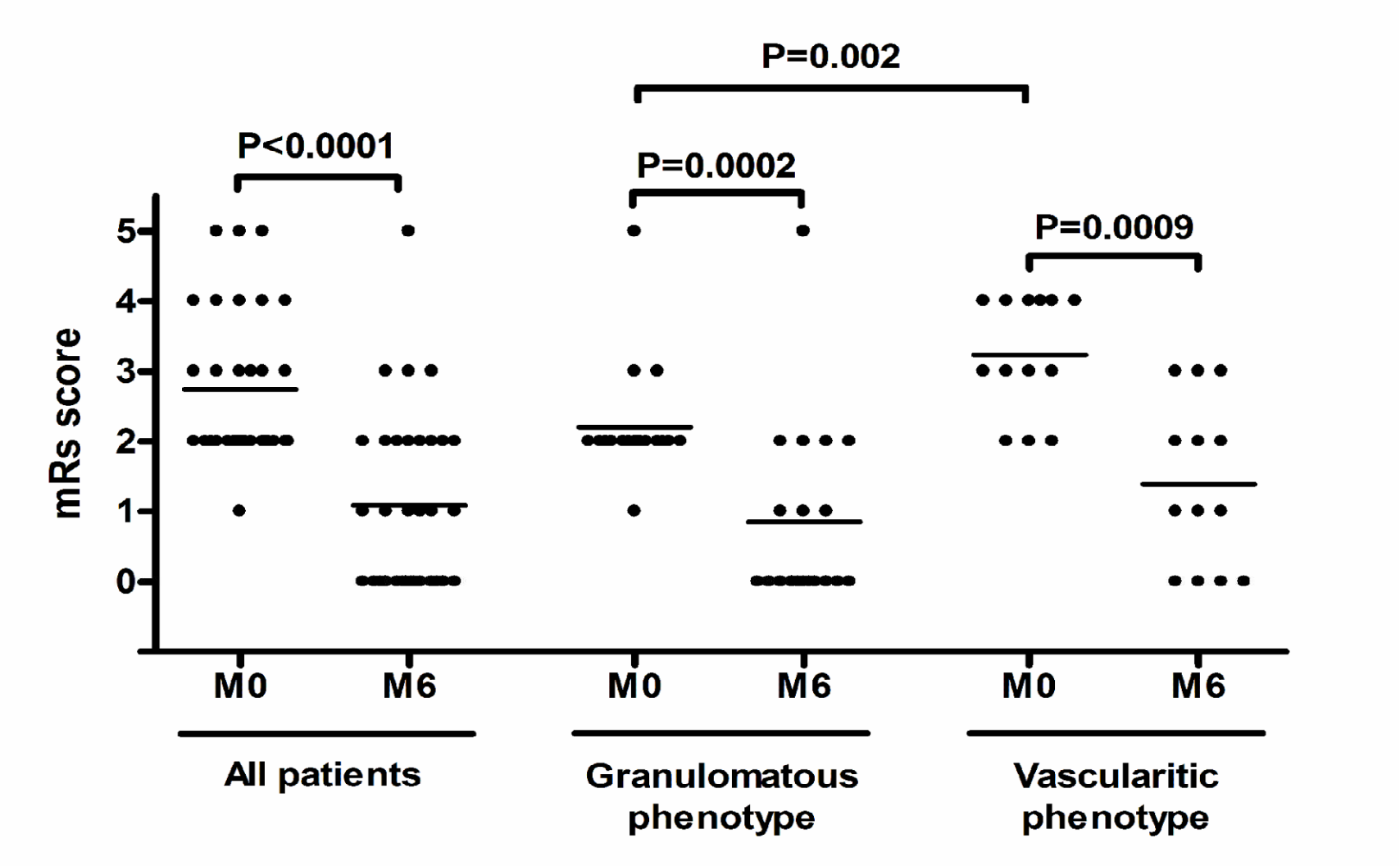


Terapia primera línea

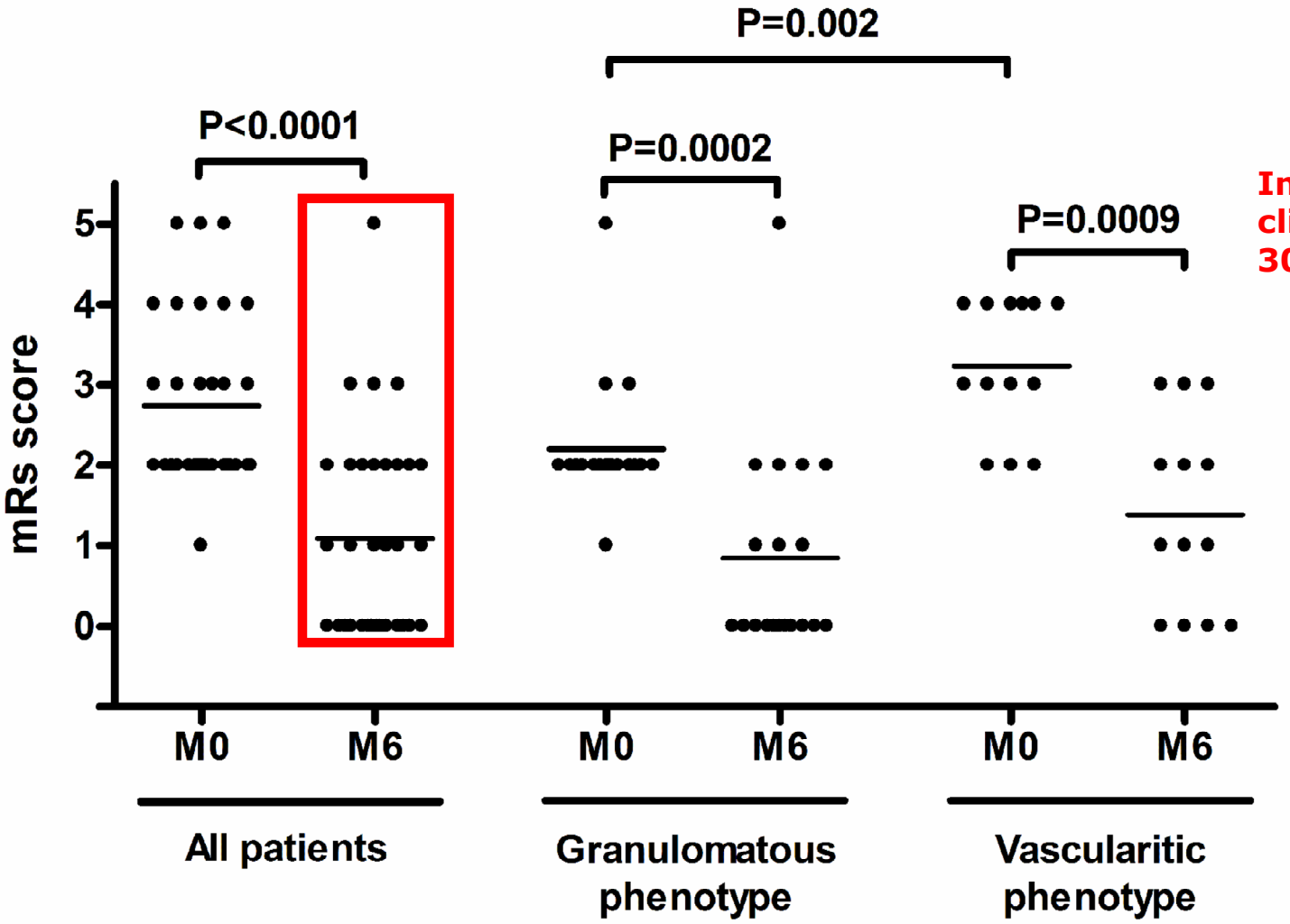
	Induction	Maintenance
Corticosteroids IV	35 (100%)	0 (0%)
Corticosteroids oral	35 (100%)	35 (100%)
Cyclophosphamid IV	25 (71%)	0 (0%)
Cyclophosphamid oral	11 (31%)	0 (0%)
Rituximab	1 (3%)	2 (7%)
Imurel	0 (0%)	18 (60%)
Methotrexate	0 (0%)	7 (23%)
IgIV	1 (3%)	1 (3%)

*

Evolution of the modified Rankin scale after induction regimen M0/M6



Evolution of the modified Rankin scale after induction regimen M0/M6



Induction therapy led to clinical response in 30/35 (86%) patients

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Terapia segunda línea: lesión SNC

Refract: al tratamiento de inducción: 14%

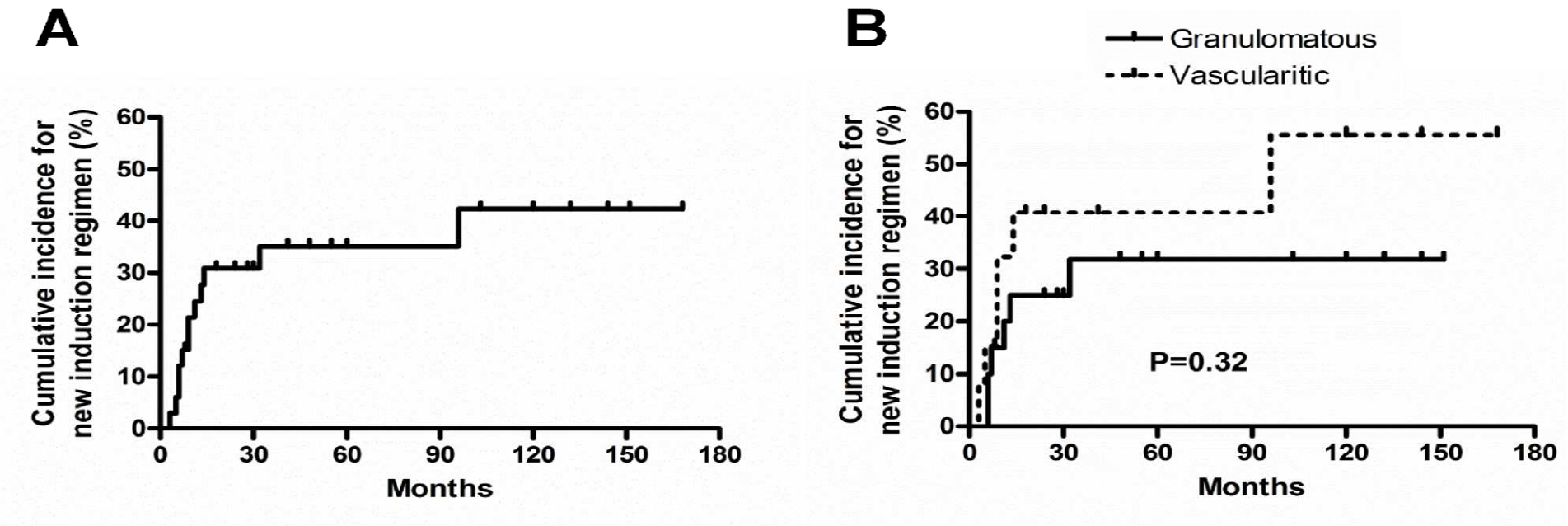
Recaída: seguimiento medio 14 m (rango 9-96): 27%

CNS involvement		n (%)
Ischemic stroke and multi infarcts areas	(V)	7 (54%)
Medullar pachymeningitis	(G)	4 (31%)
Cerebral Pachymeningitis	(G)	3 (23%)
Hemorrhagic stroke	(V)	1 (8%)
Hypophyseal involvement	(G)	1 (8%)

*

Time from first to new induction regimen for relapsing and/or refractory CNS disease

Refractarios / Recaida



Cumulative incidence for a new induction regimen because of relapsing and/or refractory CNS involvement for the whole population (**A**) and according to the granulomatous or the vascularitic phenotype of CNS involvement (**B**).

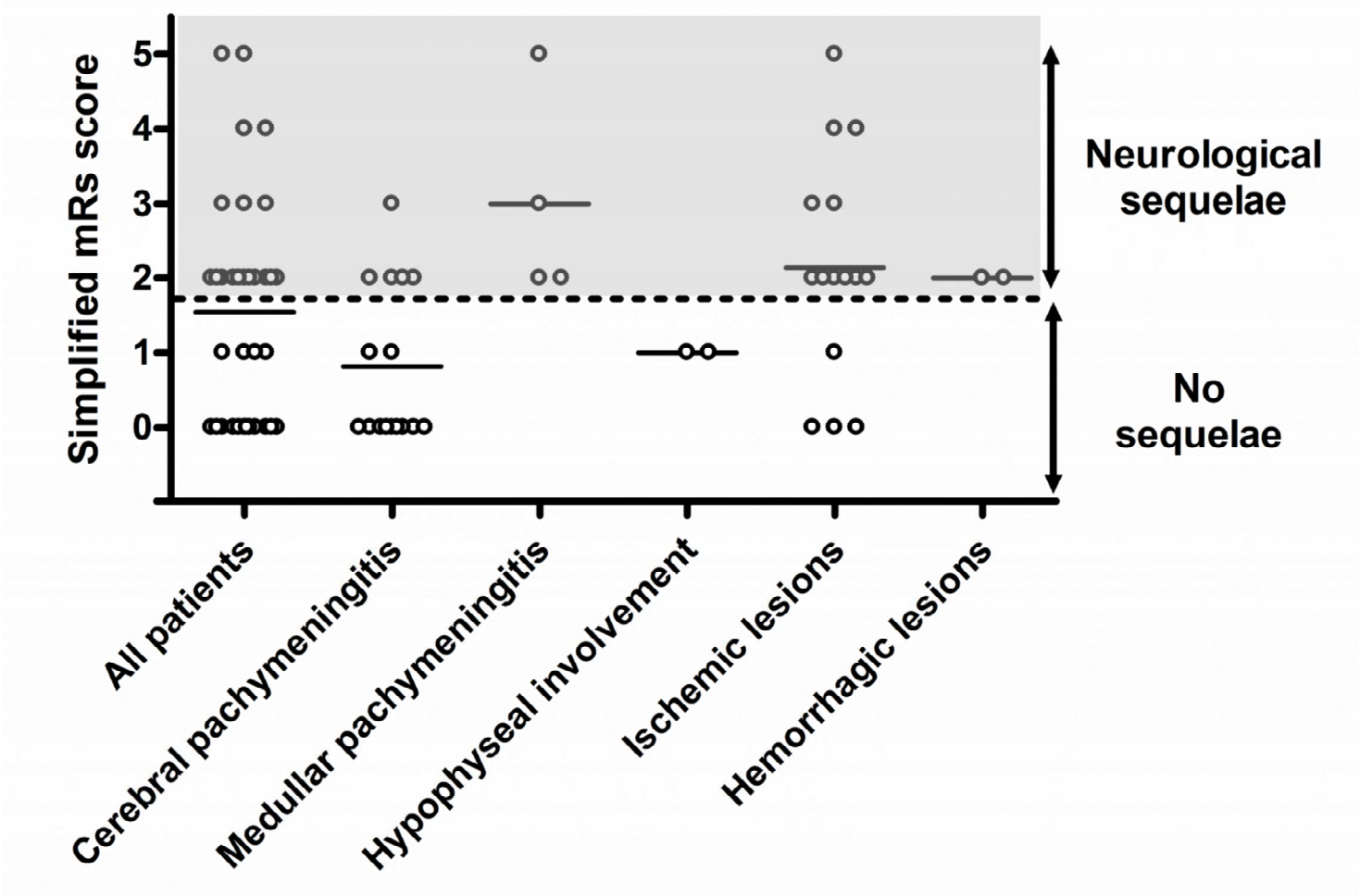
Terapia segunda línea

Refractarios / Recaida

	Induction	Maintenance
Corticosteroids IV	**13 (100%)**	0 (0%)
Corticosteroid oral	**13 (100%)**	**13 (100%)**
Cyclophosphamid oral	3 (23%)	0 (0%)
Cyclophosphamid IV	2 (15%)	0 (0%)
* **Rituximab**	**8 (61%)**	**8 (61%)**
Methotrexate	0 (0%)	4 (31%)
Imurel	0 (0%)	1 (8%)

* **None of the patients treated with RTX as induction were found to be relapsing and/or refractory after a median follow-up of 17 months**

Neurological sequelae at the end of follow-up: 51% (smRs ≥2)
Median follow-up 60 months (range 19-201)



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Para casa

1. **Afectación de SNC en GPA es infrecuente 3-8%**

1. **Lesión cerebral o medular (RM) determinan 2 fenotipos : vascular y granulomatoso**

1. **Cefaleas**

1. **Secuelas a pesar del control de la enfermedad**

1. **Formas refractarias: Rituximab?**

*

Gracias Madrid-Paris-Barcelona

*

V

DEUX CAS D'ATROPHIE MUSCULAIRE PROGRESSIVE

AVEC LÉSIONS DE LA SUBSTANCE GRISE

ET DES FAISCEAUX ANTÉRO-LATÉRAUX DE LA MOELLE ÉPINIÈRE

Par J.-M. CHARCOT et A. JOFFROY

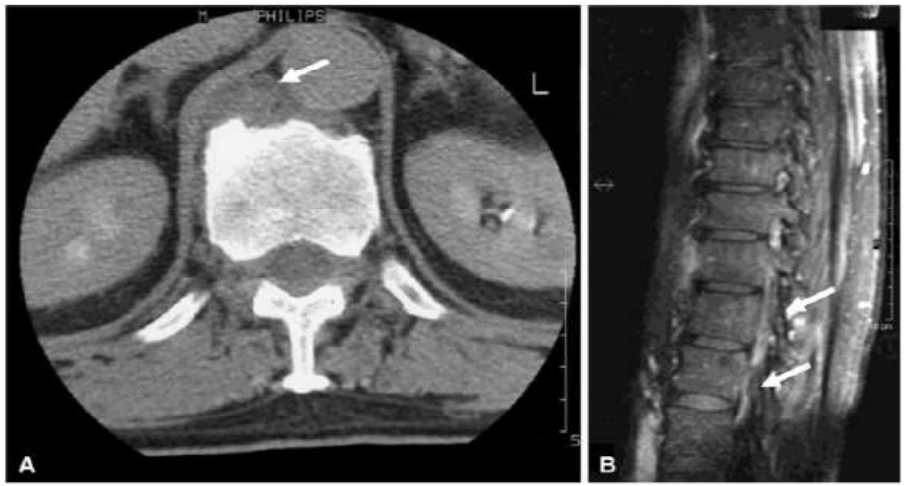
(Suite et fin [1].)

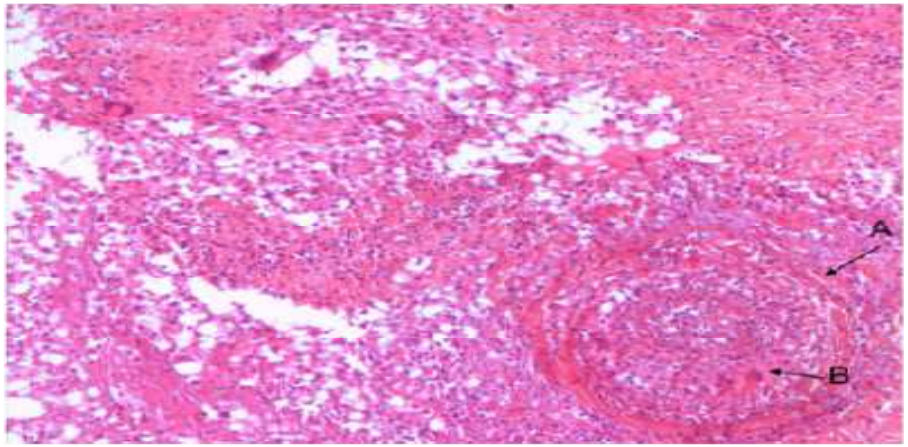
La sclérose symétrique des cordons latéraux de la moelle épinière et l'altération particulière des cellules nerveuses que nous avons rencontrées dans l'observation de Catherine A. (obs. I), se sont retrouvées, avec leurs caractères principaux, chez la malade dont nous venons de rapporter l'histoire. Mais elles se sont montrées, dans ce second cas, associées à d'autres altérations, et nous devons entrer à ce propos dans quelques développements.

Pour ce qui concerne d'abord les altérations des faisceaux blancs de la moelle observées chez Adèle C... (obs. II), il y a lieu de remarquer que, à la région cervicale, siège principal des lésions scléreuses, celles-ci occupaient à peu près indistinctement toute l'étendue des divers faisceaux ; mais elles prédominaient toutefois d'une manière remarquable à la partie la plus postérieure des cordons latéraux. Ainsi c'est en ce lieu seulement que l'hyperplasie conjonctive s'était développée et généralisée au point d'amener les lésions de la sclérose proprement dite, avec production de tissu fibrillaire et destruction de la majeure partie des tubes nerveux. Partout ailleurs et, en parti-

[1] Voy. le numéro de septembre 1869.

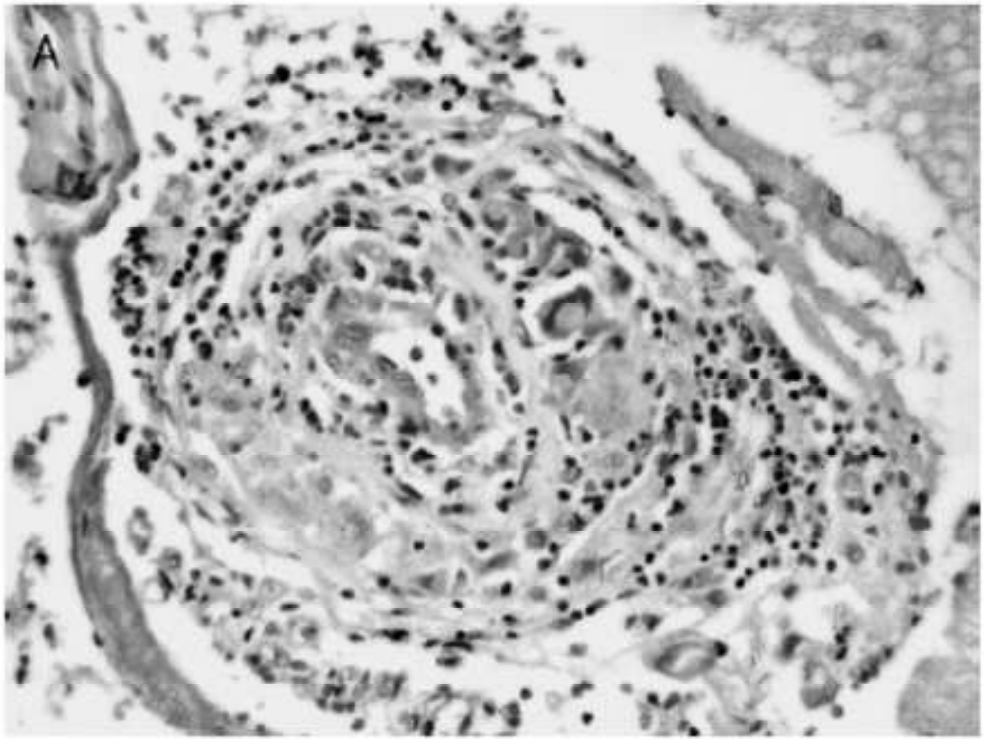
Exceptional osseous and meningeal spinal localization of ANCA-associated granulomatous vasculitis with hypertrophic spinal pachymeningitis

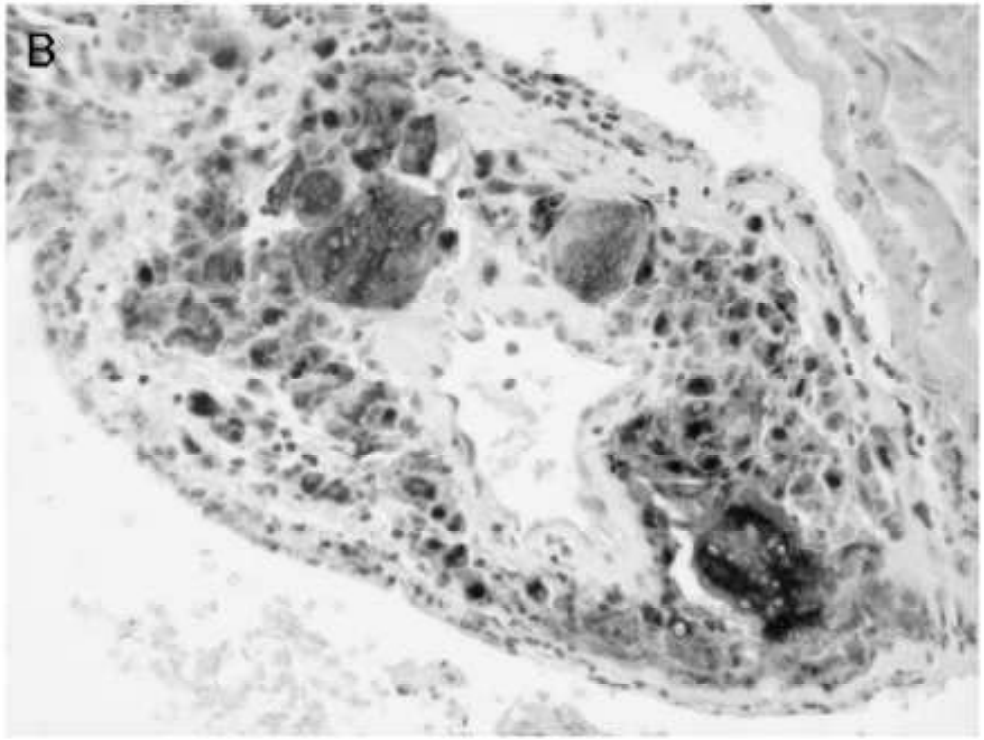




Central Nervous System Involvement in Wegener Granulomatosis

Raphaèle Seror, MD, Alfred Mahr, MD, Jacky Ramanoelina, MD, Christian Pagnoux, MD, Pascal Cohen, MD, and Loïc Guillevin, MD





IgG4-Related Disease and Hypertrophic Pachymeningitis

Zachary S. Wallace, MD, Mollie N. Carruthers, MD, Arezou Khosroshahi, MD, Robert Carruthers, MD, Shweta Shinagare, MD, Anat Stemmer-Rachamimov, MD, Vikram Deshpande, MD, and John H. Stone, MD, MPH

TABLE 2. Histopathologic Features of Pachymeningitis Patients

Case	Diagnosis	Lymphoplasmacytic Infiltrate	Storiform Fibrosis	Phlebitis	EOS	Granulomas	Giant Cells
1	IgG4-RD	Y	Y	N	N	N	Y
2	IgG4-RD	Y	Y	Y	Y	Y (few)	N
3	IgG4-RD	Y	Y	N	N	N	N
4	IgG4-RD	Y	Y	Y	Y	N	N
5	GPA	Y	N	N	Y	Y	Y
6	GPA	N	Y	N	N	N	Y
7	GPA	Y	Y	N	N	Y	Y
8	Rheumatoid arthritis	Y	N	N	N	Y	Y
9	Giant cell arteritis	N	N	N	N	N	N
10	Sarcoidosis	Y	N	N	N	Y	N
11	Lymphoma	Y	N	N	N	N	N
12	Lymphoma	Y	N	N	N	N	N
13	Undifferentiated	Y	N	N	N	N	Y
14	Undifferentiated	N	N	N	N	N	N

Abbreviations: EOS = eosinophilia.