Instituto de Salud Carlos III

RICORS - ICTUS

Cofinanciado por la Unión Europea

IV CONGRESO ANUAL DE ICTUS

10 COSAS QUE QUERRÁS SABER DE LA ENFERMEDAD NEUROVASCULAR DE PEQUEÑO VASO

¿ Trato los infartos lacunares silentes? Y ¿Cómo les evalúo la cognición?

Pilar Delgado
Hospital Vall d'Hebron

12 de junio de 2025

CONTENIDO

Terminología y consideraciones previas

Evidencias & recomendaciones de tratamiento

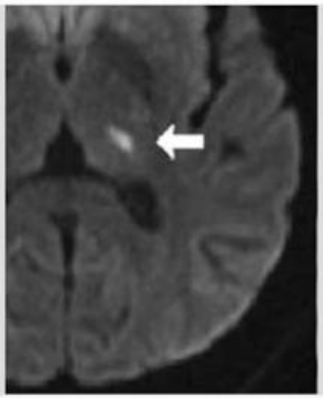
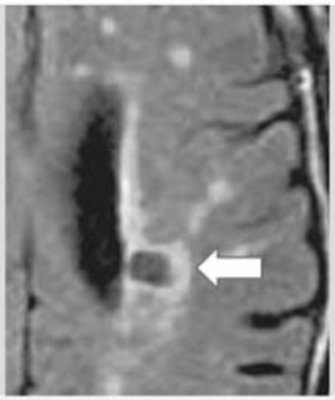
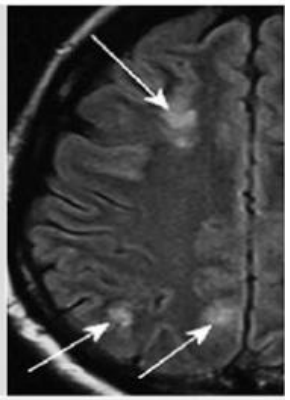
Evaluación cognitiva (y otras)

TERMINOLOGÍA

Silente versus Encubierto (Covert):

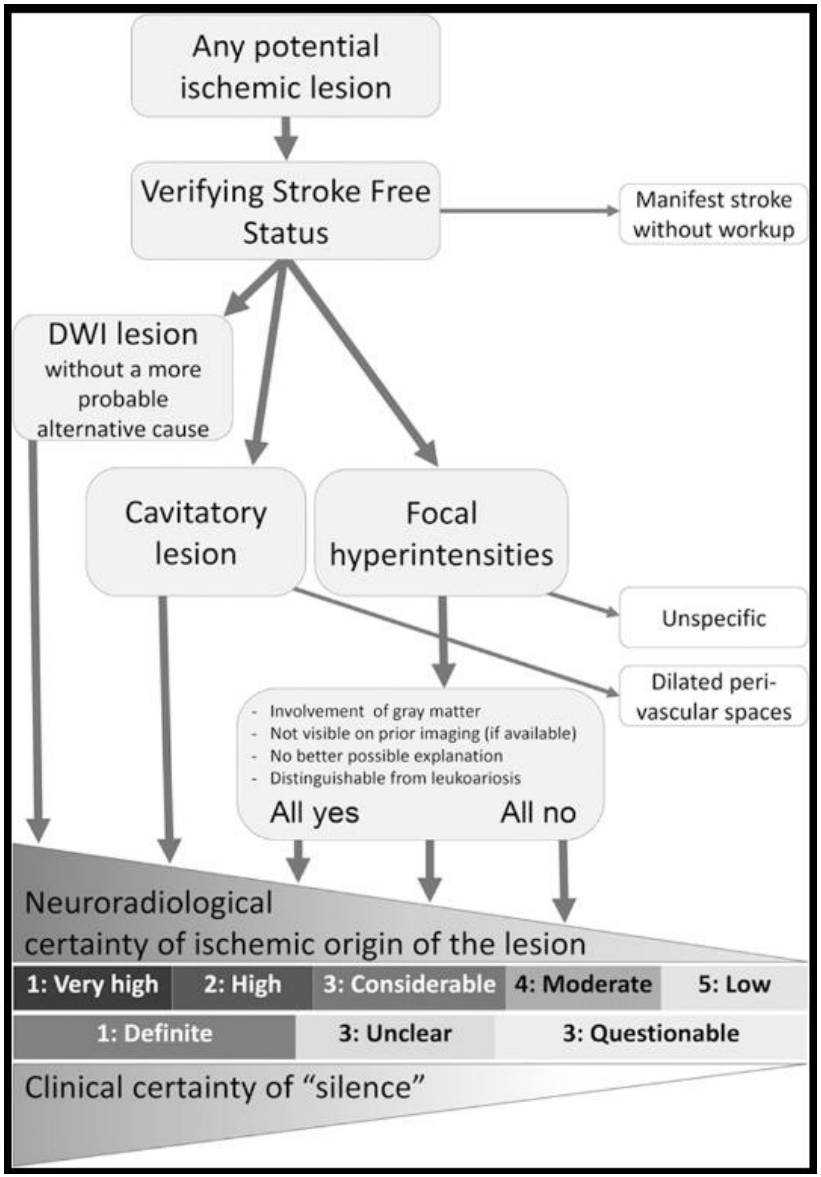
Déficits sutiles en la función física, neurológica o cognitiva

Subtipos (en orden de frecuencia):

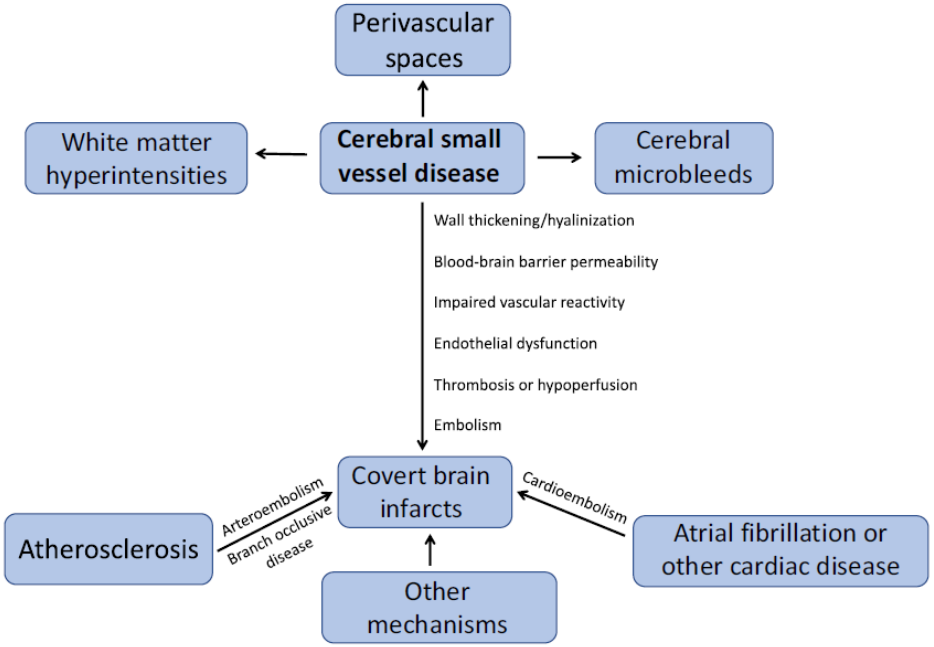
	Acute (DWI positive) lesions	Cavitatory lesions (lacunes)	T2W hyperintense/T1W hypointense lesions	
			Subcortical	Cortical
Image Example				
Inclusion	High DWI signal, low ADC High T2W/FLAIR, low T1W	≥3 mm in size, follow CSF on all sequences, slit or wedge shaped with an irregular margin. A gliotic FLAIR hyperintense rim is highly suggestive of post-ischemic etiology	Prior evidence of restricted diffusion; or is present within cortical gray matter or deep gray matter nuclei; or a lesion that is new compared with an MRI performed within 3 months	
Exclusion	Better explanation for DWI positive lesion (active multiple sclerosis lesion, abscess, …)	Smooth and longitudinally aligned with perforating vessels; when multiple, bilateral symmetrical distribution is strongly suggestive of dilated perivascular spaces, (signs of prior hemorrhage)	Lesions that have a better alternate explanation (multiple sclerosis, trauma, radiation, drug toxicity, …)	
Estimated Frequency (denominator all CBI)	5-10%	70-85%	5-10%	~10%
Remarks	Frequent after cardiac procedures but also non-cardiac surgery	Frequently also visible on CT		

CONSIDERACIONES PREVIAS

CERTEZA DE ORIGEN ISQUÉMICO Y “SILENCIO”



OTRAS ETIOLOGIAS SON POSIBLES



Evidencias & Recomendaciones de tratamiento

Guideline

EUROPEAN STROKE JOURNAL

ESO Guideline on covert cerebral small vessel disease

Joanna M Wardlaw[1], Stephanie Debette[2,3], Hanna Jokinen[4], Frank-Erik De Leeuw[5], Leonardo Pantoni[6], Hugues Chabriat[7], Julie Staals[8], Fergus Doubal[1,9], Salvatore Rudilosso[10], Sebastian Eppinger[11], Sabrina Schilling[2], Raffaele Ornello[12], Christian Enzinger[11], Charlotte Cordonnier[13], Martin Taylor-Rowan[14] and Arne G Lindgren[15]

European Stroke Journal
2021, Vol. 6(2) CXI–CLXII

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TÍPICAMENTE, ESTOS PACIENTES SE MANEJAN EN CONSULTA DE NEURÓLOGO GENERAL Y/O DE UNIDADES DE MEMORIA

“PENSAMIENTO ICTUS”- TRATAR COMO SI DE UN ICTUS SINTOMÁTICO SE TRATARA

Evidencias & Recomendaciones

CONTROL DE LA PRESIÓN ARTERIAL:

Recomendaciones basadas en la evidencia:

En sujetos **hipertensos con Covert CSVD, se recomienda mantener un control tensional** por debajo de 140/90.

NO fármaco específico para ello.

Consenso de expertos:

No se recomendaría específicamente usar targets más bajos de los habituales, pese a que hay evidencia de que pueden disminuir la progresión de las WMH.

De forma UNÁNIME, no se apoyaría el descenso sistemático de la PA, en normotensos.

Evidencias & Recomendaciones

Limitaciones de estudios anteriores: diseño, endpoints secundarios, tamaño muestral

Recruiting

Blood Pressure Reduction to Limit the Evolution of Vascular Brain Lesions in Elderly Individuals (LEOPOLD)

ClinicalTrials.gov ID NCT02472028

Sponsor Assistance Publique - Hôpitaux de Paris

Information provided by Assistance Publique - Hôpitaux de Paris (Responsible Party)

Last Update Posted 2024-05-14

Características
Mayor tamaño muestral (n=820) y seguimiento (3 años)
Amplio rango de lesiones encubiertas (CBI, WMHs)

Comparación: Reducción intensiva de la PA (SBP<135mmHg) versus manejo rutinario en pacientes con HTA y quejas cognitivas (MMSE>20).

Evidencias & Recomendaciones de tratamiento

Tratamiento antiplaquetario

Evidence-based Recommendation

We suggest against antiplatelet treatment in patients with ccSVD as a means to reduce the clinical outcome events of ischaemic or haemorrhagic strokes, cognitive decline or dementia, dependency, death, MACE, mobility, or mood disorders.

Quality of evidence: **Very low⊕**

Strength of recommendation: **Weak against intervention ↓?**

Expert Consensus Statement

Most group members agreed that:

- We advise against use of antiplatelet drugs to prevent clinical outcomes in subjects with ccSVD when no other indication for this treatment exists.
- With current available knowledge, the use of antiplatelet drugs to prevent progression of cerebral SVD may be harmful in older patients (from around ≥70 years of age) if no other indication for this treatment exists.

Evidencias & Recomendaciones de tratamiento

Tratamiento hipolipemiante

NO RECOMENDACIONES BASADAS EN LA EVIDENCIA (Baja calidad estudios)

Expert consensus statement

The group members were narrowly in favor that:

• Lipid lowering with statins could be considered in patients with ccSVD, even when no other indication for statin treatment exists, with the aim of delaying the progression of ccSVD, although the clinical implications of this delayed progression remain to be proven.

Tratamiento hipoglucemiante

Evidence-based Recommendations

In patients with diabetes who may also have ccSVD, we recommend the use of current guideline-based glucose lowering therapies, including recommended glucose and HbA1C targets, as appropriate to the management of the individual patient's diabetes. There is no justification for recommending any particular glucose-lowering therapy for this purpose.

We suggest against glucose lowering in patients with ccSVD who do not have any indication for glucose control.

Quality of evidence: Very low ⊕

Strength of recommendation: **No recommendation**

Evidencias & Recomendaciones de tratamiento

Otras estrategias no farmacológicas (Life-style interventions)

Recomendaciones y consenso de expertos, de mantener **" buena salud en general"**

Evidence-based Recommendation

In patients with ccSVD, we suggest that physical exercise has beneficial effects on cognition and possibly also on mobility, incidence of cerebrovascular events and all-cause mortality, and therefore, recommend regular physical activity in general. However, we cannot make recommendations on a specific physical intervention based on current evidence.
Quality of evidence: Very Low ⊕
Strength of recommendation: **Weak for intervention ↑?**
In patients with ccSVD there is no clear evidence that other non-physical lifestyle interventions have beneficial effects on clinical outcomes.
Quality of evidence: Very low ⊕
Strength of recommendation: **No recommendation**

Evidencias & Recomendaciones de tratamiento

FÁRMACOS INDICADOS EN EL DETERIORO COGNITIVO O DEMENCIA

Evidence-based Recommendation

In patients with ccSVD, we suggest against the use of conventional anti-dementia drugs, including cholinesterase inhibitors or memantine, as a means to reduce cognitive decline or dementia.
Quality of evidence: **Very low** ⊕
Strength of recommendation: **Weak against intervention** ↓?

Cosas a tener en cuenta:
La mayoría de estos ensayos en DEMENCIA VASCULAR duraron solo 24-28 semanas, pero la enfermedad se desarrolla a lo largo de años

Evidencias & Recomendaciones de tratamiento

Original Research Article

EUROPEAN STROKE JOURNAL

Management of covert brain infarction survey: A call to care for and trial this neglected population

European Stroke Journal
2023, Vol. 8(4) 1079–1088

DOI: 10.1177/23969873231187444
journals.sagepub.com/home/eso
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Resultados de la encuesta:

The **majority indicated that they were uncertain** regarding **useful investigations and further management** of CBI patients (median 67 on a slider 0–100, 95% CI 35–81).

Almost all respondents **(97%) indicated that they would assess vascular risk factors.**

Although **most would investigate and treat similarly to ischemic stroke for both phenotypes, including initiating antithrombotic treatment (74%)**, there was considerable diagnostic and therapeutic heterogeneity.

Less than half of respondents (42%) would assess cognitive function or depression.

¿Cómo les evalúo la cognición?

Received: 18 May 2020 | Revised: 8 February 2020 | Accepted: 10 May 2020

DOI: 10.1002/alz.12221

Alzheimer's & Dementia®
THE JOURNAL OF THE ALZHEIMER'S ASSOCIATION

THEORETICAL ARTICLE

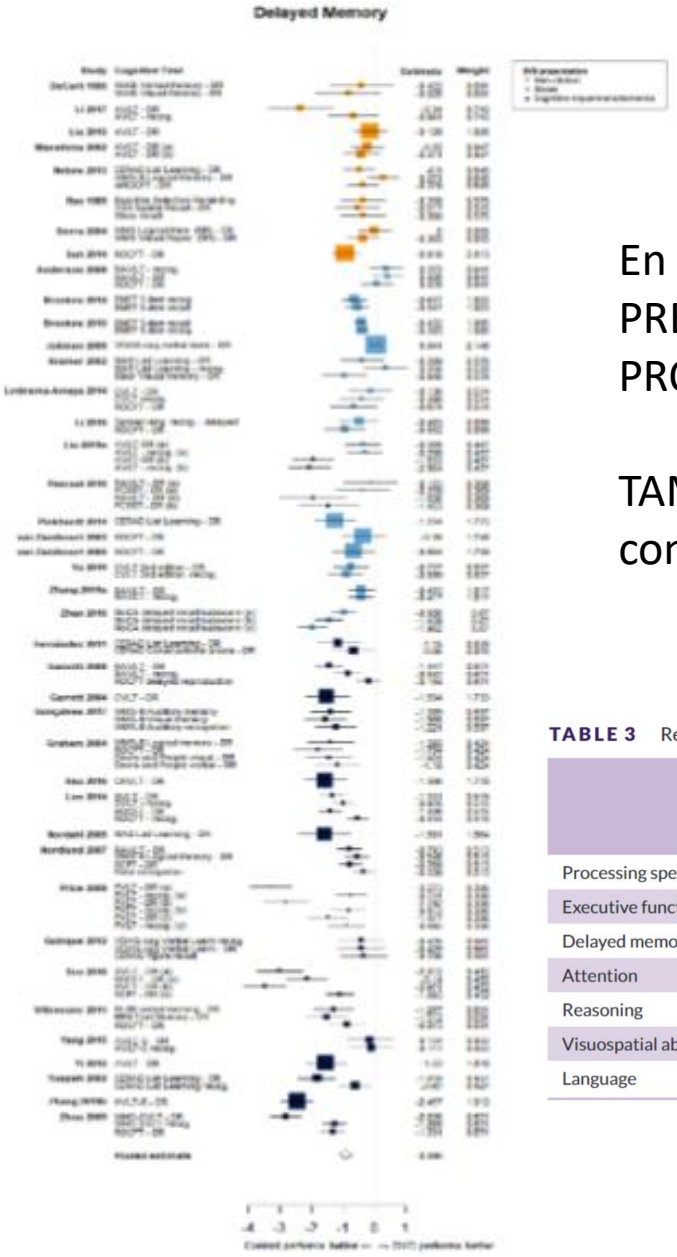
Cognitive impairment in sporadic cerebral small vessel disease: A systematic review and meta-analysis

Olivia K. L. Hamilton[1,2,3] | Ellen V. Backhouse[1,2] | Esther Janssen[1,2] | Angela C. C. Jochems[1,2] | Caragh Maher[1,2] | Tuula E. Ritakari[1,2] | Anna J. Stevenson[2,4,5] | Lihua Xia[6] | Ian J. Deary[3,6] | Joanna M. Wardlaw[1,2,3]

Evidencia de la relación con el deterioro cognitivo o la demencia

Clásicamente, ¿Perfil subcortical?

¿Cómo les evalúo la cognición?



En **contra de lo establecido**, NO HAY TAN CLARO PREDOMINIO DE AFECTACIÓN DE LA VELOCIDAD DE PROCESAMIENTO Y FUNCIONES EJECUTIVAS.

TAMBIÉN EN LA EPVC ENCUBIERTA, en comparación con formas sintomáticas (post-ictus lacunar).

TABLE 3 Results of meta-analysis models for each cognitive domain

	Studies	Outcomes	Estimate (SE)	95% CI	Degrees of freedom	Uncorrected p value	Heterogeneity τ^2	Heterogeneity I^2
Processing speed	37	88	−0.885 (0.14)	−1.17, −0.60	35.8	2.3×10^{-7}	0.6	91.4
Executive function	58	188	−0.936 (0.08)	−1.09, −0.78	56.1	$<2 \times 10^{-16}$	0.4	87.6
Delayed memory	41	98	−0.898 (0.10)	−1.10, −0.69	39.6	7.2×10^{-11}	0.5	88.0
Attention	12	19	−0.622 (0.14)	−0.94, −0.31	10.6	0.001	0.2	80.8
Reasoning	16	25	−0.634 (0.14)	−0.93, −0.34	14.6	4.2×10^{-4}	0.2	76.5
Visuospatial ability	27	50	−0.720 (0.11)	−0.96, −0.48	25.3	1.3×10^{-6}	0.3	77.6
Language	24	42	−0.808 (0.10)	−1.01, −0.60	22.7	3.2×10^{-8}	0.3	81.2

¿Cómo les evalúo la cognición?

Table 1
NINDS-CSN Neuropsychological assessment supported for use in VICCCS guidelines

Assessment tool
Animal naming (semantic fluency)
Controlled Oral Word Association (phonemic fluency)
WAIS-III Digit Symbol-Coding (processing speed and activation)
Trail Making Test (processing speed and set shifting)
Revised Hopkins Verbal Learning Test (additional scoring options: strategic learning; episodic memory; and executive organization)
Rey-Osterrieth Complex Figure Copy (visuospatial)
Boston Naming Test, 2nd Edition, Short Form (visual confrontation naming)
Simple and choice reaction time tasks
Neuropsychiatric Inventory, Questionnaire Version (NPI-Q)
Center for Epidemiological Studies-Depression Scale (CES-D), Short Form
Mini–Mental State Examination (MMSE; Supplementary Material)

Supported tests from the proposed NINDS-CSN [13].

Estado cognitivo global (tests de screening-MOCA, MMSE, etc..)

Se requieren tests SENSIBLES: Aplicación de una batería de tests cognitivos de duración menor a 60 minutos

DOMINIOS COGNITIVOS MANDATORIOS

Funciones ejecutivas
Memoria
Lenguaje
Atención
Funciones visuoespaciales

OTROS DOMINIOS OPCIONALES A EXPLORAR

Cognición social
Aprendizaje
Neuropsiquiatría

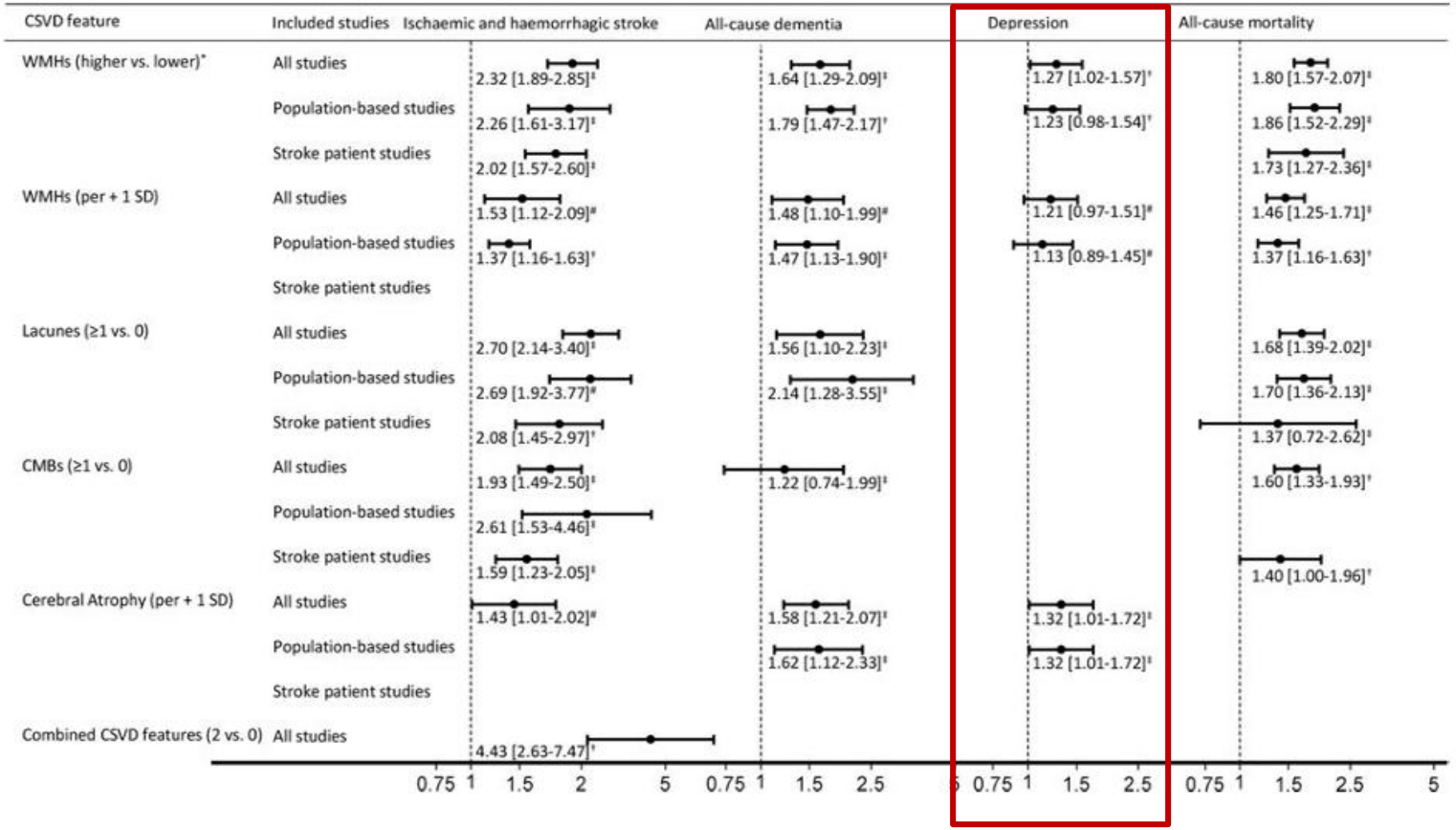
Evaluación cognitiva (y otras, ¿Les evalúo algo más?)

Neurosci Biobehav Rev. 2018 July ; 90: 164–173. doi:10.1016/j.neubiorev.2018.04.003.

Cerebral small vessel disease and risk of incident stroke, dementia and depression, and all-cause mortality: A systematic review and meta-analysis

Sytze P. Rensma[a,b,1], **Thomas T. van Sloten**[a,b,*,1], **Lenore J. Launer**[c], **Coen D.A. Stehouwer**[a,b]

VALORACIÓN DE LA DEPRESIÓN
GDS Geriatric Depression Scale (GDS)
Beck Depression Inventory (BDI)
Hospital Anxiety and Depression Scale (HADS)
Hamilton Depression Scale
Montgomery-Ashberg Depression Scale (MADRS)



Evaluación cognitiva (y otras, ¿Les evalúo algo más?)

Neuropsychiatric symptoms associated with cerebral small vessel disease: a systematic review and meta-analysis

Una Clancy, Daniel Gilmartin, Angela C C Jochems, Lucy Knox, Fergus N Doubal, Joanna M Wardlaw

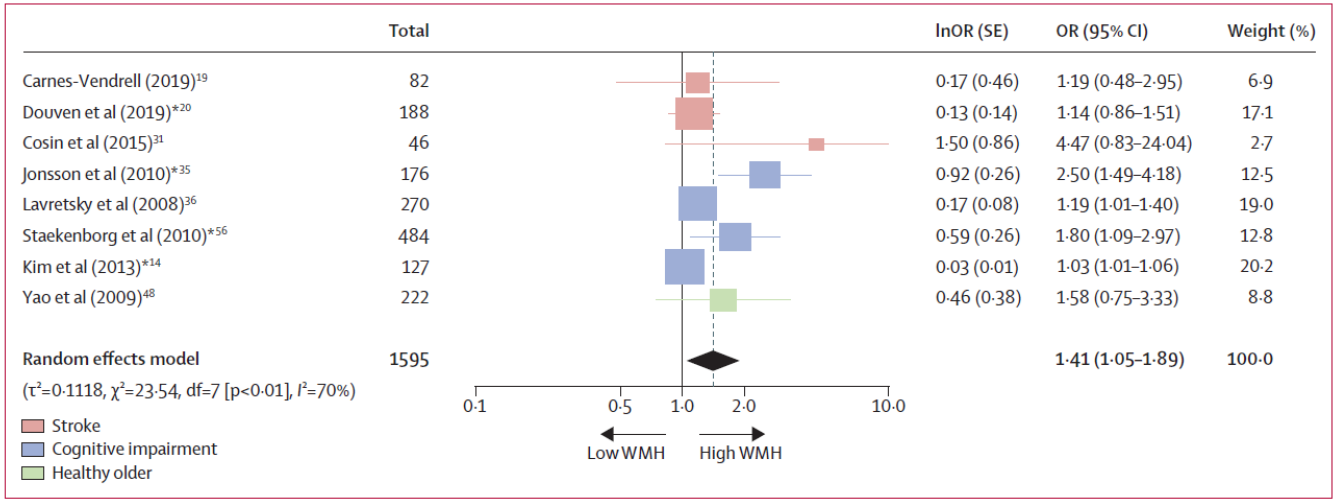
RELACIÓN CON SÍNTOMAS **NEUROPSIQUIÁTRICOS Y COGNITIVOS SUTILES**

QUEJAS SUBJETIVAS DE MEMORIA

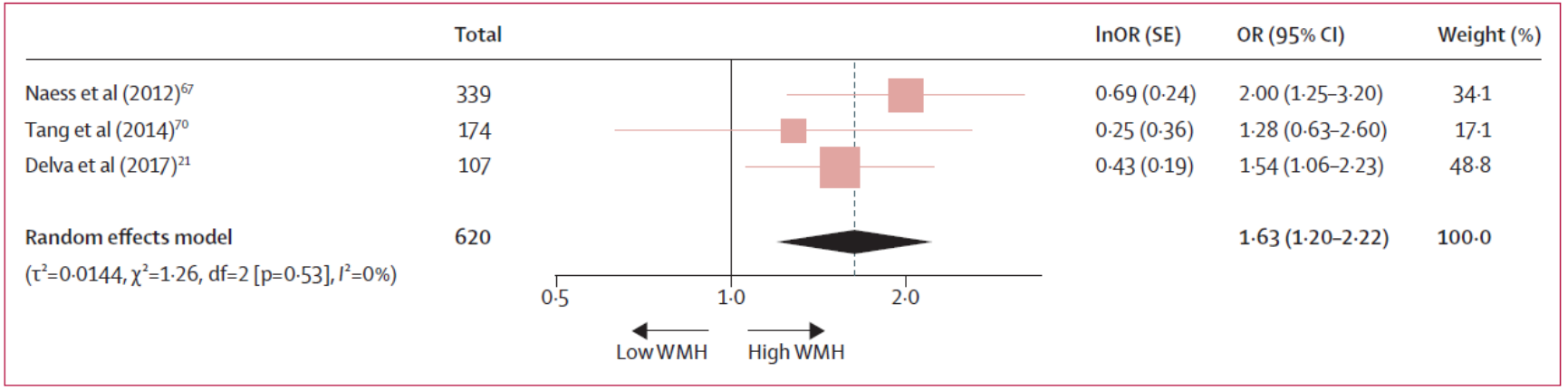
Clancy U, Lancet Psychiatry 2021

Evaluación cognitiva (y otras, ¿Les evalúo algo más?)

APATÍA

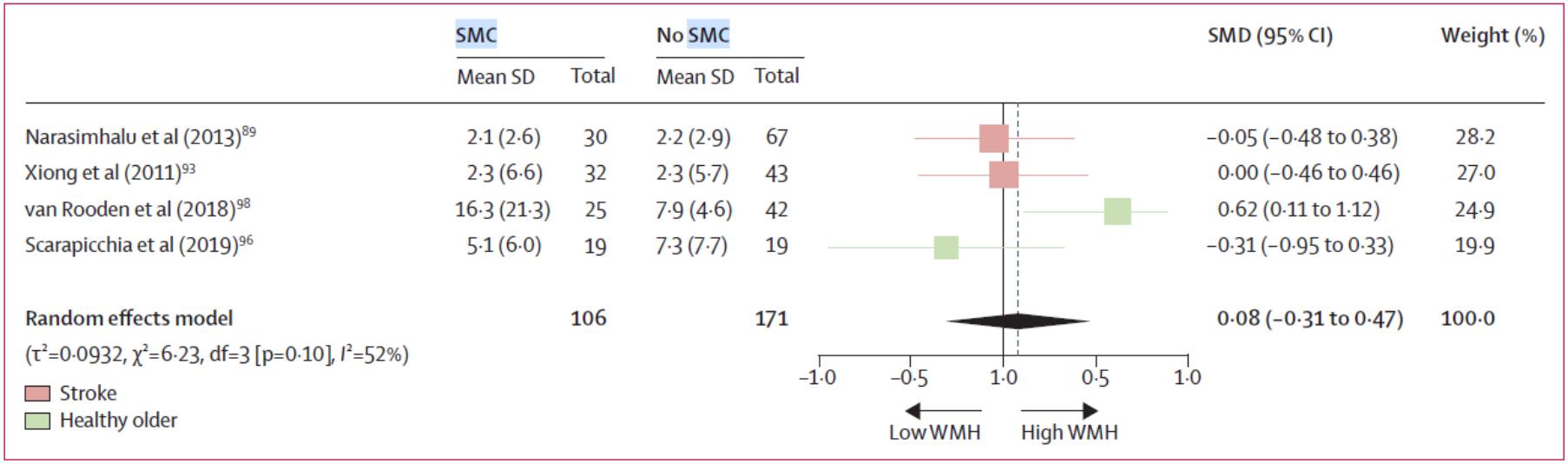


FATIGA



Evaluación cognitiva (y otras, ¿Les evalúo algo más?)

QUEJAS SUBJETIVAS DE MEMORIA

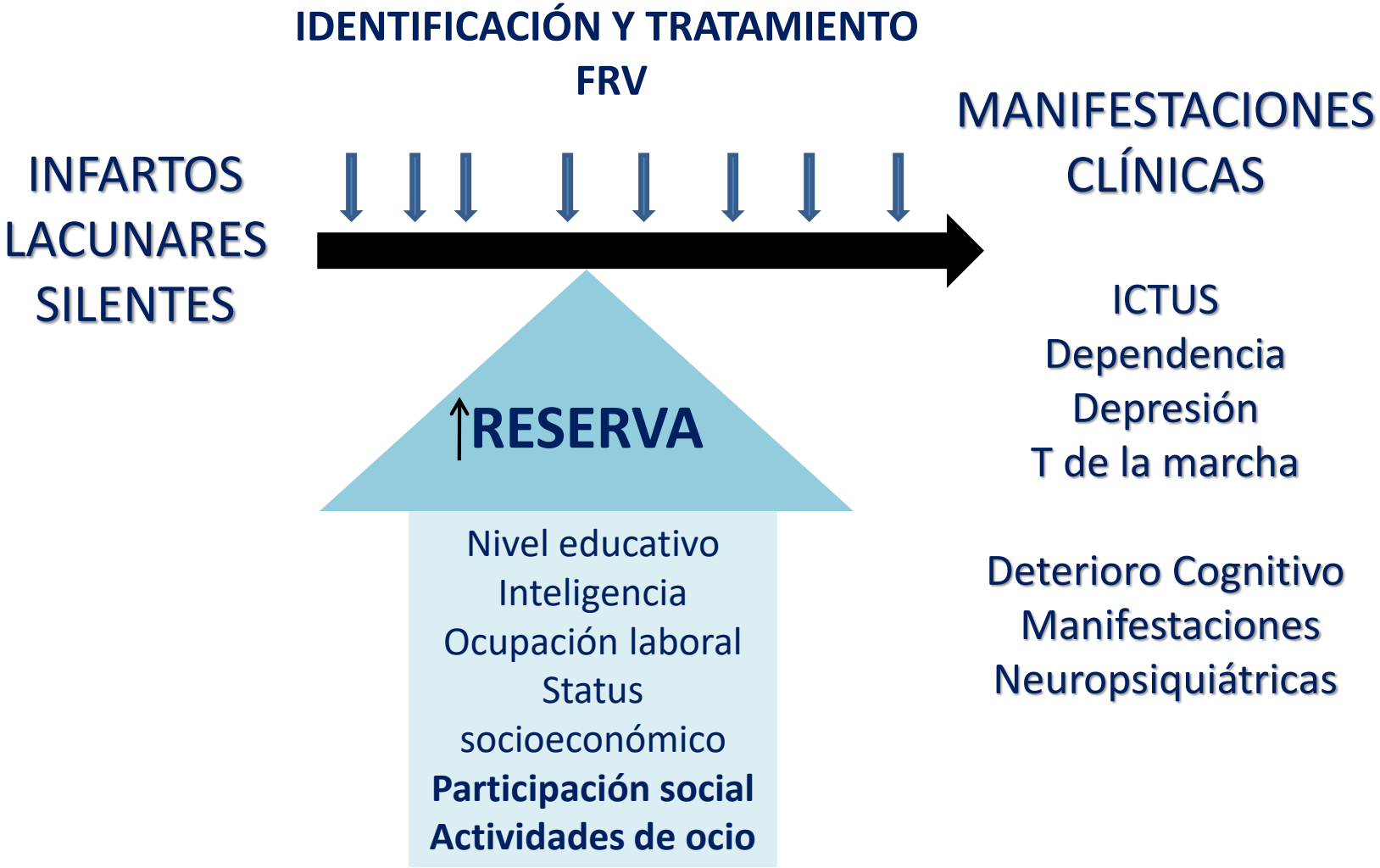


Datos insuficientes para meta-analizar: ansiedad, labilidad emocional, psicosis

CONCLUSIÓN: AMPLIACIÓN A UN “FENOTIPO CONDUCTUAL” TEMPRANO EN LA EPVC

Evidencias & Recomendaciones de tratamiento

- **Promover la resistencia al daño** inducido por los infartos silentes y compensar la patologia.



Muchas gracias por la atención