ACV ISQUEMICO

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SAE
SOCIEDAD ARGENTINA DE EMERGENCIAS

TEMAS DE DEBATE

-Diagnóstico

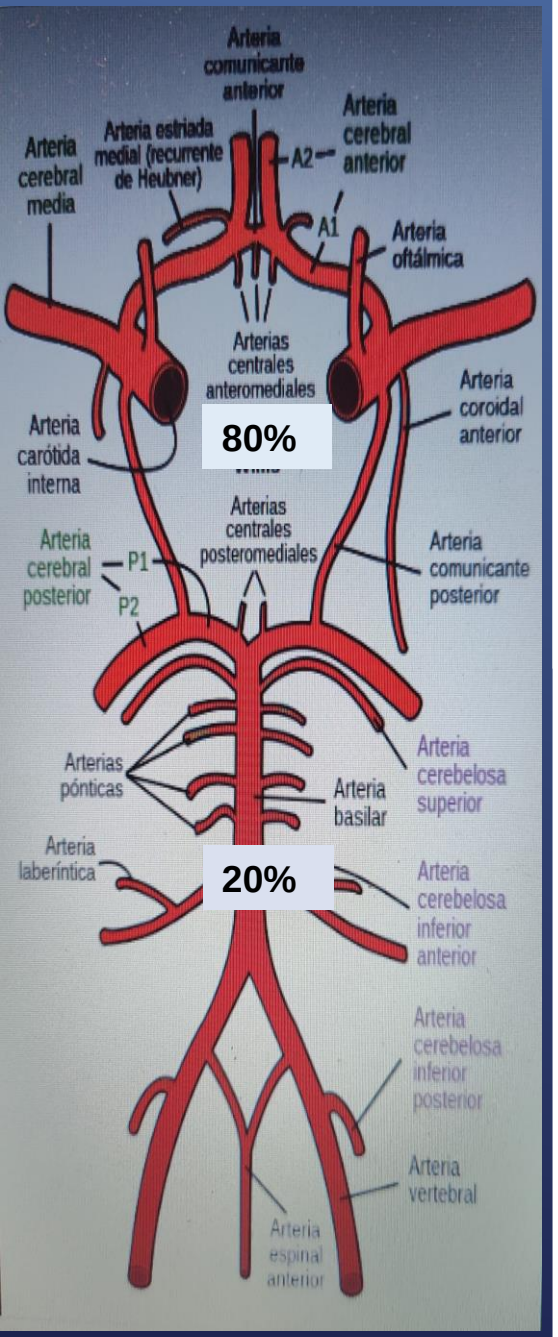
-Tratamiento

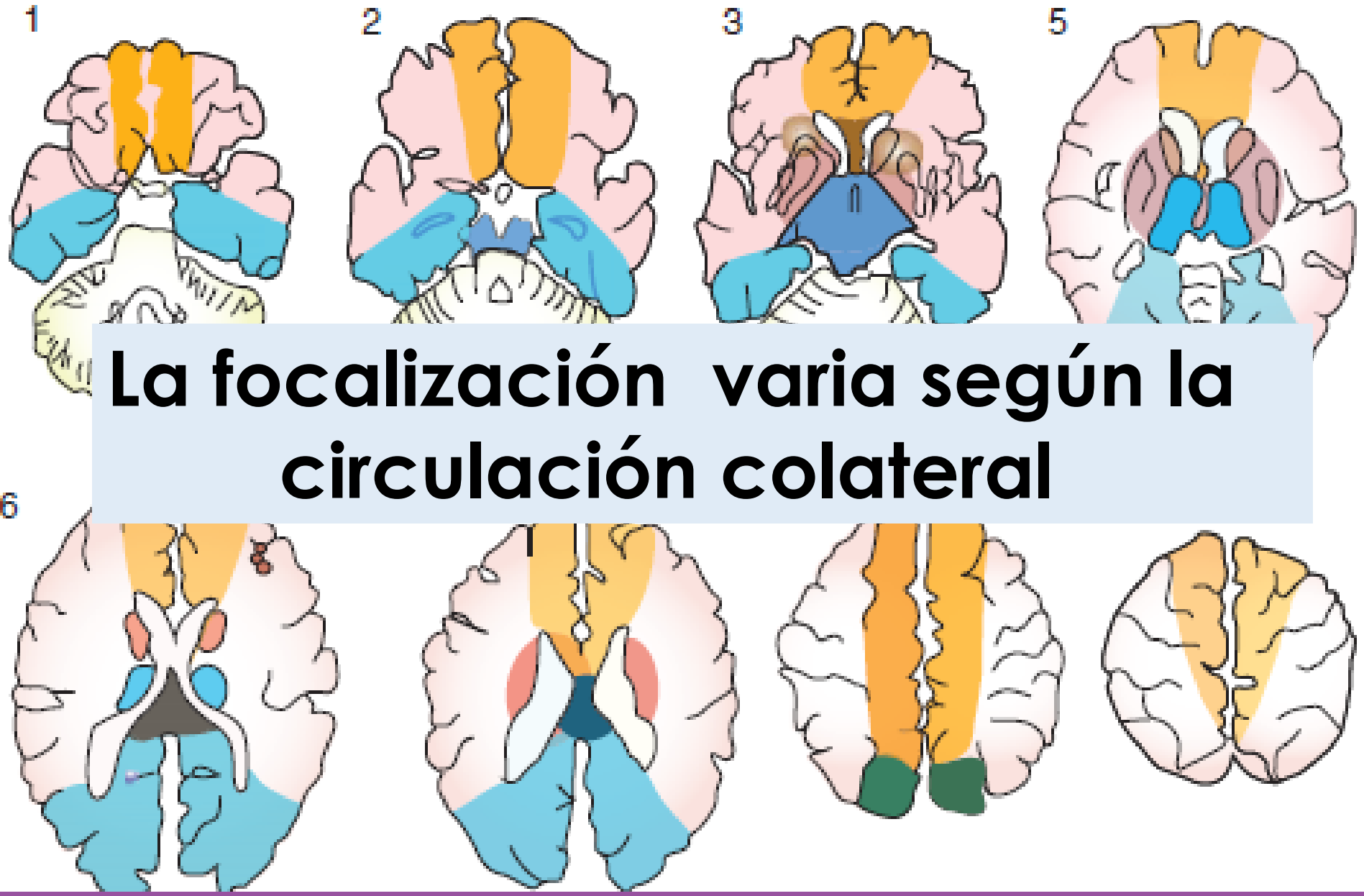
ACV: INJURIA VASCULAR AGUDA que **DISMINUYE EL FLUJO SANGUINEO** en una **REGION** especifica cerebral /retina /medula espinal ocasionando **INFARTO**(**MUERTE**) **NEURONAL** y **DISFUNCION NEUROLOGICA AGUDA** (**FOCO**)

Rosen

ISQUEMICO: -**87%** ACV

-**OCLUSION** de la vasculatura cerebral





La focalización varia según la circulación colateral

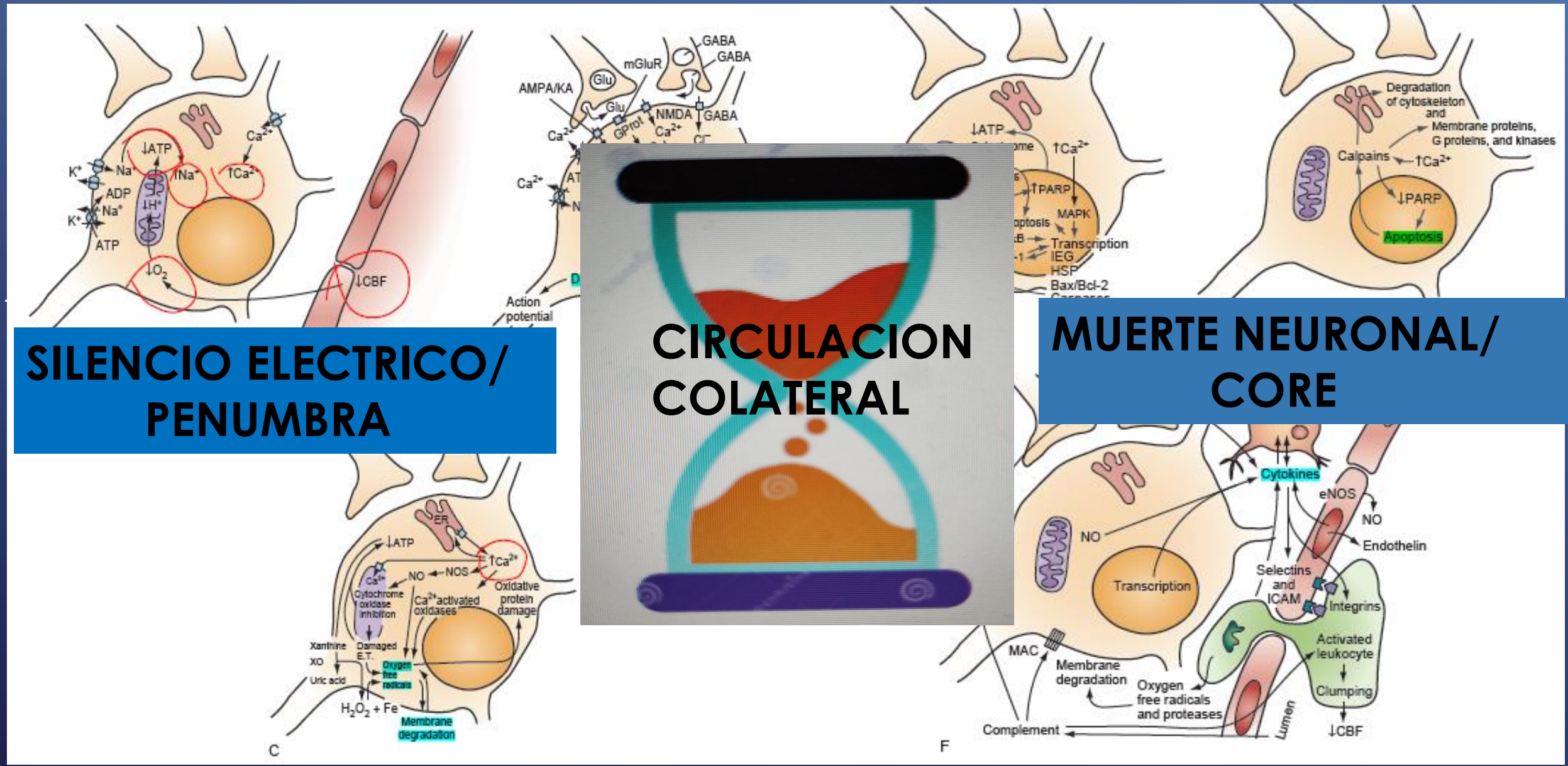
Tabla 2. Clasificación topográfica. Oxfordshire Community Stroke Project (OCSP).

TACI (Total Anterior Circulation Infarction)
Cuando el déficit neurológico cumple los tres criterios siguientes: 1. Disfunción cerebral cortical (p.ej. afasia, agnosia, extinción sensitiva) 2. Déficit motor y/o sensitivo en al menos dos de las tres áreas siguientes: cara, brazo, pierna 3. Hemianopsia homónima
PACI (Partial Anterior Circulation Infarction)
Cuando se cumple alguno de los criterios siguientes: 1. Disfunción cerebral cortical (p.ej. afasia, agnosia, extinción sensitiva) 2. Cuando se cumplen dos de los tres criterios TACI; o 3. Déficit motor y/o sensitivo más restringido que el calificado como LACI (p.ej. déficit limitado a una sola extremidad, o a cara y mano pero sin afectación del resto del brazo)
LACI (Lacunar Infarction)
Cuando no existe disfunción cerebral cortical ni hemianopsia y se cumple unos de los siguientes criterios: 1. Hemisíndrome motor puro que afecta al menos a dos de los siguientes: cara, brazo y pierna 2. Hemisíndrome sensitivo puro que afecta al menos a dos de los siguientes: cara, brazo y pierna 3. Hemisíndrome sensitivo-motor puro que afecta al menos a dos de las siguientes: cara, brazo y pierna 4. Hemiparesia-ataxia 5. Disartria-mano torpe u otro síndrome lacunar
POCI (Posterior Circulation Infarction)
Cuando se cumple alguno de los criterios siguientes: 1. Afectación ipsilateral de pares craneales con déficit motor y/o sensitivo contralateral 2. Déficit motor y/o sensitivo bilateral 3. Patología oculomotora. 4. Disfunción cerebelosa sin déficit de vías largas ipsilaterales 5. Hemianopsia homónima aislada

Manual Urgencias Neurologicas SEN-2023

MODELO INJURIA CEREBRAL HIPOXICO – ISQUEMICA 2° PCR

MODELO INJURIA CEREBRAL HIPOXICO – ISQUEMICA 2° PCR

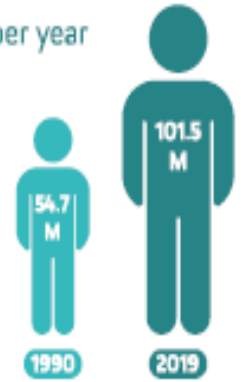


ACV EN NUMEROS.....

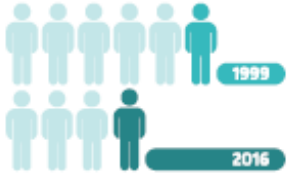
World Stroke Organization (WSO): Global Stroke Fact Sheet 2022

Around the world, there are
12.2 MILLION new strokes per year
ONE EVERY 3 SECONDS

101 MILLION
people worldwide are living
with stroke aftermath
THIS NUMBER HAS ALMOST DOUBLED OVER THE LAST 30 YEARS



1 in 4 people will have a stroke in their lifetime
THIS NUMBER HAS INCREASED 50%OVER THE LAST 17 YEARS



In 2019, **63%** of stroke happened in people younger than 70 years old.
STROKE IS NO LONGER A DISEASE OF THE ELDERLY

The total estimated worldwide cost of stroke (in international dollars) in 2017 was **US$861 BILLION**
(ABOUT 1.12% OF THE GLOBAL GDP)

The number of stroke survivors in world regions in 2019.

89% OF THE GLOBAL STROKE DEATHS AND DISABILITY COMBINED RESIDE IN LOW-TO MIDDLE-INCOME COUNTRIES

ACV EN NUMEROS……..

Incidence and case-fatality rate of stroke in General Villegas, Buenos Aires, Argentina. The EstEPA population study

Table 4. — *Comparison of all first-ever strokes and 30-day fatality rates between Latin-America countries*

Country	Region	Study	Time lapse	n	All, crude (x 100,000)	STD, Argentina	STD, WHO World	STD, Segiś World	30 day-fatality rates
Argentina	Villegas	*EstEPA*	1 Jun 2017 - 31 May 2020	115	124.2	109.7	86.9	72.4	27.0%
	Tandil	*Prevista*	5 Jan 2013-30 Apr 2015	334	127.9	105.5	88.1	76.5	20.1%
Chile	Ñuble	*Ñandú*	1 Apr 2015 - 31 Mar 2016	890	180.4		121.7	n/a	24.6%
	Iquique	*PISCIS*	1 Jul 2000 - 30 Jun 2002	292	73.6		108.2	94.1	23.3%
Mexico	Durango	*BASID*	1 Aug 2007 - 31 Jul 2008	238	96.1		118.2	110.4	39%*
Brazil	Joinville	*JOINVASC*	1 Jan 2005 - 31 Dec 2006	759	76.9		n/a	105.4	19.1%
	Matao		1 Nov 2003 - 31 Oct 2004	81	108		137	137	18.5%
Uruguay	Rivera		1 Mar 2000 - 28 Feb 2001	79	125.6		92.3	n/a	n/a

STD: Standardization
n/a: data not available
*In-hospital case fatality rate

75,7% ACV i
13.5% AIT

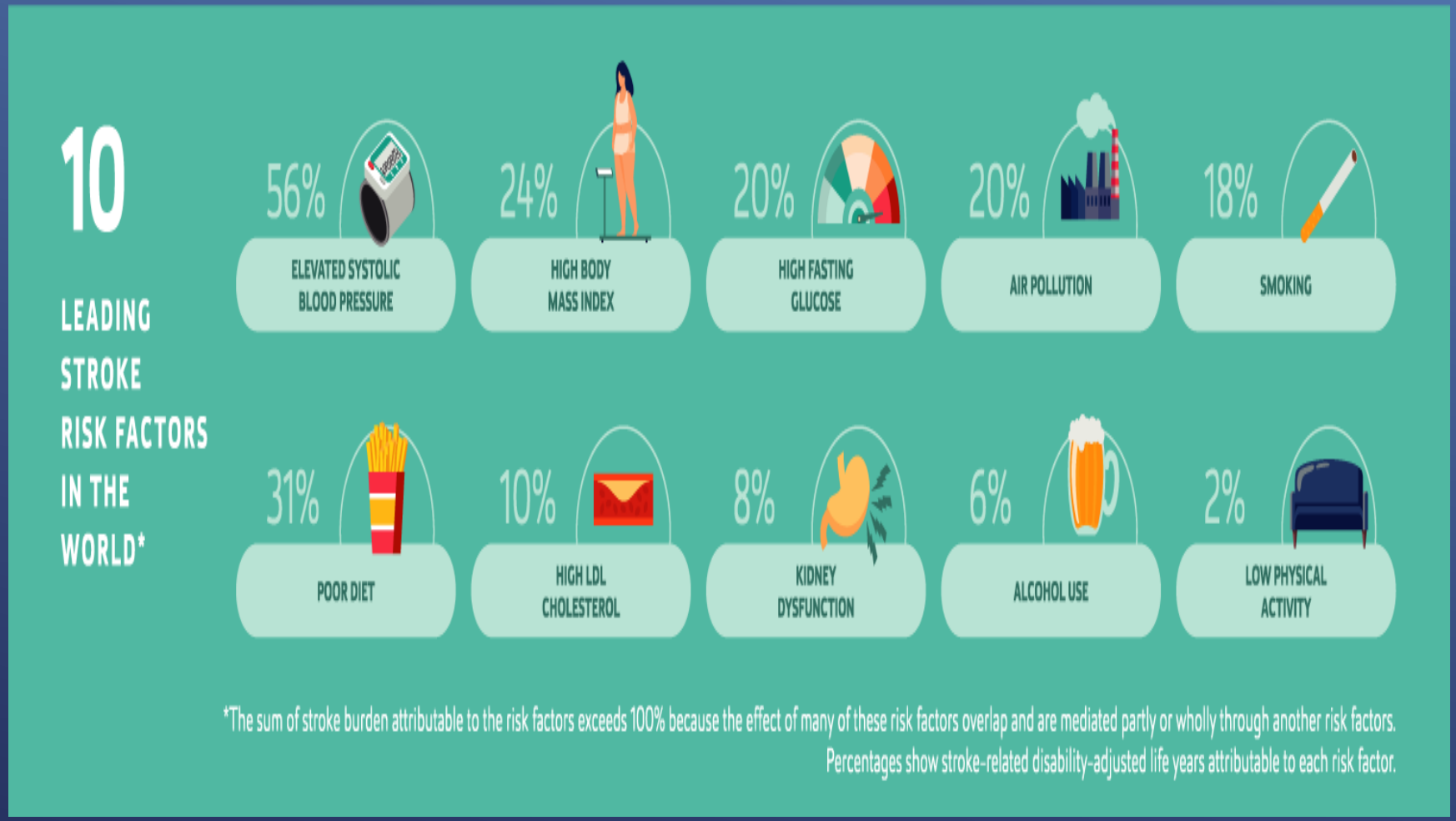
Edad media ACVI / TIA **≥ 70**

Sexo: - ACVI **59 % hombres**
- AIT **58% mujeres**

Tto reperfusion ACVI
-7.7% rTPA
-0% Trombectomia

Mortalidad 30 días:
- ACVI **18.3%**
- TIA **4.8%**

ETIOLOGIA: CLASIFICACION TOAST



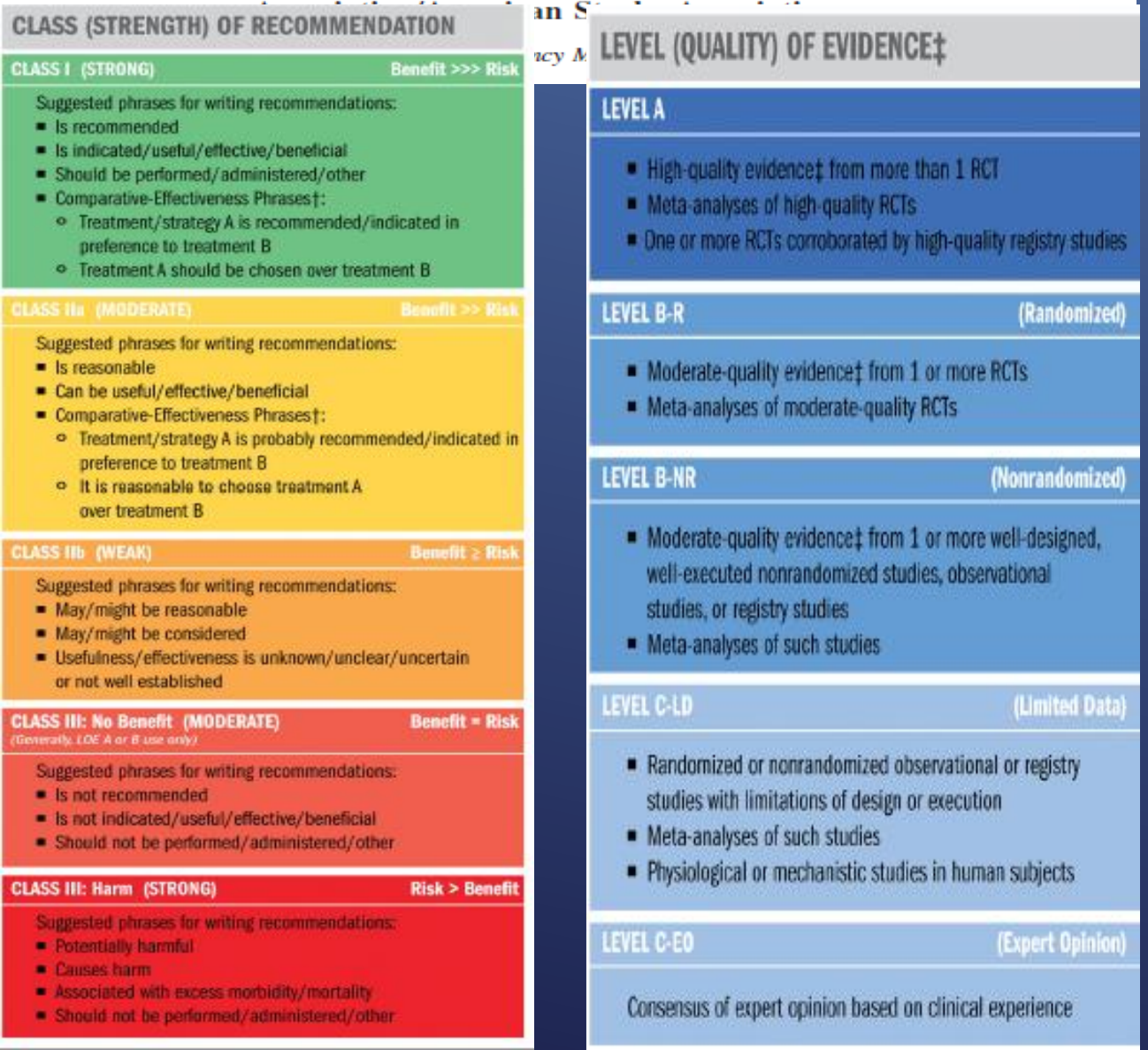
OCLUSION **GRAN VASO**:
EMBOLISMO/ ATEROTROMBOSIS

OCLUSION **PEQUEÑO VASO/LACUNAR** (**≤ 20**mm**):**
30% ACVI
ATEROTROMBOSIS/ EMBOLISMO/ HEMODINAMICO

AHA/ASA Guideline

Guidelines for the Early Management of Patients With Acute Ischemic Stroke: 2019 Update to the 2018 Guidelines for the Early Management of Acute Ischemic Stroke

A Guideline for Healthcare Professionals From the American Heart



Guideline

EUROPEAN STROKE JOURNAL

European Stroke Organisation (ESO) guidelines on intravenous thrombolysis for acute ischaemic stroke

European Stroke Journal
0(0) 1–62

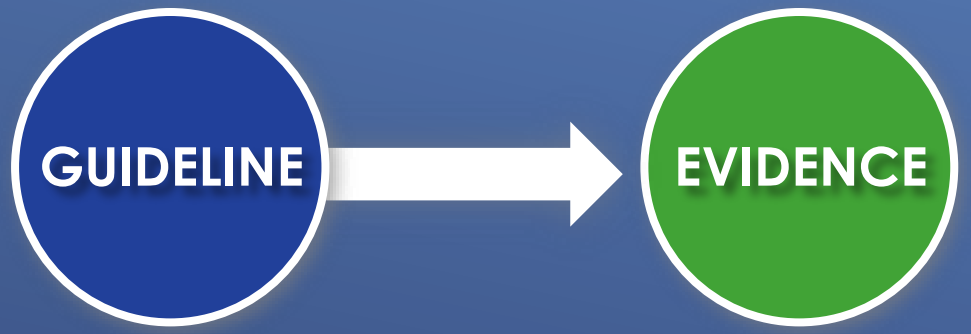
DOI: 10.1177/23969873219898 65
journals.sagepub.com/home/eso
SAGE

-CALIDAD EVIDENCIA ++++
-FUERZA DE RECOMENDACIÓN fuerte /débil

Calidad de la evidencia metodología grade

Grade	Definicion
Alta ⊕⊕⊕⊕	Investigación futura es poco probable que cambie nuestra confianza en la estimación del efecto.
Moderada ⊕⊕⊕○	Investigación futura es probable que cambie nuestra confianza en la estimación del efecto.
Baja ⊕⊕○○	Investigación futura es muy probable que tenga un impacto en nuestra confianza en la estimación del efecto.
Muy baja ⊕○○○	Cualquier estimación en el efecto es muy incierto

LA FUERZA DE LAS RECOMENDACIONES SE APOYA NO SOLO EN LA CALIDAD DE LA EVIDENCIA, SINO EN UNA SERIE DE FACTORES COMO EL BALANCE ENTRE RIESGOS Y BENEFICIOS, VALORES Y PREFERENCIAS DE PACIENTES Y PROFESIONALES Y EL CONSUMO DE RECURSOS O COSTES.



Evidence to Practice

World Stroke Organization

"TIME IS BRAIN": ESCASA VENTANA TERAPEUTICA

RECOCIMIENTO, EVALUACION, DIAGNOSTICO y **TRATAMIENTO PROTOLIZADO** y **MEDIDO DISMINUYE MORBIMORTALIDAD**

Cada **MINUTO** **DEMORA** en el manejo del **ACVi** se **PIERDE** la **MISMA CANTIDAD** de **NEURONAS** que entre **3** – **6 años** de **ENVEJECIMIENTO** (Consenso IS ACVI Agudo 2019)

ACTIVACION "CODIGO STROKE"

INJURIA CEREBRAL ISQUEMICA: MANEJO

META:

*RESTAURAR **FSC**

*PREVENIR **LESION SECUNDARIA**

MORBI / MORTALIDAD

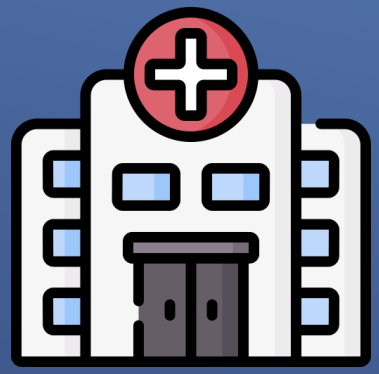
CADENA ATENCION / SUPERVIVENCIA ACV

NINDS-2003 (National Institutes of Neurological Disorders and Stroke)

COMUNIDAD

ATENCION PREHOSPITALARIA

36´



ATENCION HOSPITALARIA: REPERFUSION

REHABILITACIÓN

PREVENCIÓN SECUNDARIA

CADENA ATENCION / SUPERVIVENCIA ACV

NINDS-2003 (National Institutes of Neurological Disorders and Stroke)

EDUCACION COMUNITARIA RECONOCIMIENTO/SOSPECHA ACV:

-PACIENTE/ TESTIGO **RECONOCEN SIGNOS ACV** Y LLAMADO AL **911/SAME**
95% ptes tienen ACV fuera hospital

-**PROGRAMAS DE EDUCACION** "Codigo Stroke" I B-NR
- **continuos** en el tiempo
- con llegada a **TODA la población**: edad, sexo, raza
-USA: los hombres, raza negra y los Hispánicos son los que **menos activan EMS**

-**AUMENTARIA** de **4 al 28%** el uso de **rTPA** dentro de las **3 hs** si TODOS los pacientes arribaran a tiempo al DE (CASPR: California Acute Stroke Pilot Registry)

CADENA ATENCION / SUPERVIVENCIA ACV

NINDS-2003 (National Institutes of Neurological Disorders and Stroke)

ATENCION PREHOSPITALARIA

36´

-**DESPACHO PRIORITARIO**: < 90 seg desde recepción llamada I B-NR

-**TIEMPO RESPUESTA**: < 8 min desde recepción llamada al **arribo** en escena

-**TIEMPO EN ESCENA**: < 15 mim

-HCL focalizada: **hora comienzo, medicación, AP CI reperfusion, tel contacto**

-SOSPECHA DX: ESTABILIZACION(**ABCs**): **glucemia, TA, Oxig, SCORES** (LAPSS/CPSS), **CVP**

-**TIEMPO TRANSPORTE**: MINIMIZADO……RED ATENCION ACV I A

-al nivel de atención MAS CERCANO que administre rTPA I B-NR

-beneficio de **evitar centro rTPA cercano** por centro **mayor complejidad mas distante** es **incierto** IIb B-NR

-**transporte aéreo** si transporte **terrestre > 1 hora** al centro stroke mas cercano

-traslado **INTERHOSPITALARIO menor tiempo posible**

-NOTIFICACION al centro receptor I B-NR

Guidelines Early Management Acute Ischemic Stroke: 2019 -AHA

CADENA ATENCION / SUPERVIVENCIA ACV

NINDS-2003 (National Institutes of Neurological Disorders and Stroke)

ATENCION PREHOSPITALARIA

36´

TABLE 167-3 Prehospital Stroke Scales — Tintinalli 9th

Cincinnati Prehospital Stroke Scale (If *any* of the three items are abnormal, sensitivity = 66%, specificity = 87% for acute stroke.)	1. Facial droop (abnormal: one side of face does not move as well as other side) 2. Arm drift (abnormal: one arm does not move or one arm drifts down compared with the other) 3. Speech (abnormal: slurred, inappropriate words or mute)
Los Angeles Prehospital Stroke Screen (If answers to *all* items 1–6 are "Yes" or "Unknown," sensitivity = 91% [95% confidence interval (CI) 76%–98%], specificity = 97% [95% CI 93%–99%] for acute stroke.)	1. Age >45 y 2. No history of seizure disorder 3. New onset of neurologic symptoms in last 24 h 4. Patient ambulatory at baseline (prior to event) 5. Blood glucose level of 60–400 milligrams/dL 6. Obvious asymmetry in *any* of the following examinations: facial smile/grimace, grip, arm strength

NO hay ESCALA **SOSPECHA** CERTERA LVO NI ACVI vrs Hemorrágico

CADENA ATENCION / SUPERVIVENCIA ACV

NINDS-2003 (National Institutes of Neurological Disorders and Stroke)

ATENCION PREHOSPITALARIA

36´

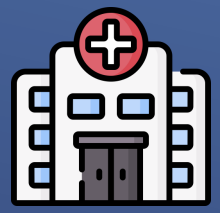
No recomendado
– Administrar de manera excesiva fluidos intravenosos – Descer – Admin cientes no hipoglu – Medica – Demor ervenciones pre-hos efectuadas con mayor seguridad y eficacia durante el traslado o en el centro hospitalario

EVITAR LESION SECUNDARIA

Consenso Argentino ACVI Agudo-2019

CADENA ATENCION / SUPERVIVENCIA ACV

NINDS-2003 (National Institutes of Neurological Disorders and Stroke)



ATENCION HOSPITALARIA: **ER +/- US/UCI**

REPERFUSION

EVITAR LESION SECUNDARIA

D.E: ≤ 3 hs

TRIAGE
EVALUACION

DIAGNOSTICO

TRATAMIENTO

D.E: ≤ 3 hs

-**TRIAGE:** atención **PRIORITARIA** / **CODIGO ROJO** (= IAM/TRAUMA GRAVE)

-**EVALUACION INICIAL RAPIDA** y **FOCALIZADA**

-identificar **Stroke**, causas, comorbilidades
-descartar "**MIMICS**"
- **ABCDs /S**
-Anamnesis
-Examen físico/**Scores**
-Exámenes complementarios

-**DIAGNOSTICO PRECOZ**: **NEUROIMAGEN**: PARENQUIMA CEREBRAL Y VASOS

-**TTO**: - **SOSTEN:** EVITAR LESION SECUNDARIA
- REPERFUSION: -**FIBRINOLISIS ENDOVENOSA**
-**ENDOVASCULAR: TROMBECTOMIA**

VENTANA TERAPEUTICA TIEMPO indicación reperfusión

D.E ≤ 3 hs

TIME IS BRAIN

- -TRIAGE……≤ 5´
- -PUERTA-MEDICO……≤ 10´
- -PUERTA- EQUIPO STROKE……≤ 15´
- -PUERTA –TC (inicio)……≤ 20´
- -PUERTA-TC interpretación……≤ 45´
- -**PUERTA-rTPA/AGUJA/DTN TIME/HORA ORO**….≤ 45-60´
- -PUERTA- Unidad Stroke(admisión)……≤ 3hs

D.E: ≤ 3 hs **EVALUACION** y **DIAGNOSTICO**

-ABCDs
-SCALAS: **NIHSS**

NEUROIMAGEN

20´-45´

OTROS **EXAMENES COMPLEMENTARIOS**:

-**GLUCEMIA +/- COAGULOGRAMA**(Plaquetas, RIN,kPTT s/ sospecha clínica)
-**ECG**
-**TROPONINA**
-**RX T**

D.E: ≤ 3 hs Evaluación **A** y **B**

Supplemental oxygen should be provided to maintain oxygen saturation >94%.

I	C-LD

Supplemental oxygen is not recommended in nonhypoxic patients with AIS.

III: No Benefit	B-R

HIPEROXIA SECUNDARIA **AUMENTA** STRESS OXIDATIVO , AUMENTA LESION CEREBRAL, AUMENTA **MORTALIDAD** –Rosen-

Airway support and ventilatory assistance are recommended for the treatment of patients with acute stroke who have decreased consciousness or who have bulbar dysfunction that causes compromise of the airway.

I	C-EO

D.E: ≤ 3 hs Evaluación **C**

Hypotension and hypovolemia should be corrected to maintain systemic perfusion levels necessary to support organ function.

I	C-EO

-Valor **TA** **mejor** outcome: **desconoce**
-**Coloides = cristaloides** (Revisión Sistemática 12 estudios)
-**NO** hay estudios comparen **diferentes soluciones isotónicas entre si**
-NO hay **información** sobre **volumen** y **duración** aporte **fluidos**

The usefulness of drug-induced hypertension in patients with AIS is not well established.

IIb	B-R

D.E: ≤ 3 hs Evaluación **C**

Patients who have elevated BP and are otherwise eligible for treatment with IV alteplase should have their BP carefully lowered so that their SBP is <185 mm Hg and their diastolic BP is <110 mm Hg before IV fibrinolytic therapy is initiated.

I	B-NR

- **TA POST rTPA ≤ 180/105** mmHG **por 24 hs**
- **>** riesgo de **hemorragia** si **TA** es **mayor/ variable** (estudios observacionales)
- Valor **TA** a partir **aumenta riesgo sangrado** se **desconoce**

In patients for whom mechanical thrombectomy is planned and who have not received IV fibrinolytic therapy, it is reasonable to maintain BP ≤185/110 mm Hg before the procedure.

IIa	B-NR

D.E: ≤ 3 hs Evaluación **C: Manejo TA**

COR IIb	LOE C-EO
Patient otherwise eligible for emergency reperfusion therapy except that BP is >185/110 mm Hg:	
Labetalol 10–20 mg IV over 1–2 min, may repeat 1 time; or	
Nicardipine 5 mg/h IV, titrate up by 2.5 mg/h every 5–15 min, maximum 15 mg/h; when desired BP reached, adjust to maintain proper BP limits; or	
Clevidipine 1–2 mg/h IV, titrate by doubling the dose every 2–5 min until desired BP reached; maximum 21 mg/h	
Other agents (eg, hydralazine, enalaprilat) may also be considered	
If BP is not maintained ≤185/110 mm Hg, do not administer alteplase	
Management of BP during and after alteplase or other emergency reperfusion therapy to maintain BP ≤180/105 mm Hg:	
Monitor BP every 15 min for 2 h from the start of alteplase therapy, then every 30 min for 6 h, and then every hour for 16 h	
If systolic BP >180–230 mm Hg or diastolic BP >105–120 mm Hg:	
Labetalol 10 mg IV followed by continuous IV infusion 2–8 mg/min; or	
Nicardipine 5 mg/h IV, titrate up to desired effect by 2.5 mg/h every 5–15 min, maximum 15 mg/h; or	
Clevidipine 1–2 mg/h IV, titrate by doubling the dose every 2–5 min until desired BP reached; maximum 21 mg/h	
If BP not controlled or diastolic BP >140 mm Hg, consider IV sodium nitroprusside	

Considerar alternativas manejo según comorbilidades : IAM, Insuf Cardiaca, disección aortica, Preclampsia, Eclampsia

D.E: ≤ 3 hs Evaluación **Glucemia** y **Temperatura**

Hypoglycemia (blood glucose <60 mg/dL) should be treated in patients with AIS.

I | C-LD

Evidence indicates that persistent in-hospital hyperglycemia during the first 24 hours after AIS is associated with worse outcomes than normoglycemia, and thus, it is reasonable to treat hyperglycemia to achieve blood glucose levels in a range of 140 to 180 mg/dL and to closely monitor to prevent hypoglycemia in patients with AIS.

IIa | C-LD

Sources of hyperthermia (temperature >38°C) should be identified and treated, and antipyretic medications should be administered to lower temperature in hyperthermic patients with stroke.

I | C-LD

< 37° y > 39° primeras 24 hs aumenta mortalidad intrahospitalaria

(amplia cohorte multicéntrica retrospectiva de 2005 a 2013 en ptes UCI

In patients with AIS, the benefit of treatment with induced hypothermia is uncertain.

IIb | B-R

D.E: ≤ 3 hs Evaluacion **NIHSS**

Tested Item	Title	Responses and Scores
1A	Level of consciousness	0—Alert
		1—Drowsy
		2—Obtunded
		3—Coma/unr
1B	Orientation questions (2)	0—Answers
		1—Answers 1 correctly
4	Facial movement	0—Normal
		1—Minor facial weakness
		2—Partial facial weakness
5	Motor functi	
	a. Left	
	b. Right	
		4—No movement
6	Motor function (leg)	0—No drift
		1—Drift before 5 s
		2—Falls before 5 s
		3—No effort against gravity
		4—No movement
7	Limb ataxia	0—No ataxia
10	Articulation	0—Normal
		1—Mild dysarthria
		2—Severe loss (2 modalities lost)

I

B-NR

-RAPIDA : ***5´***
-CONFIABLE
-REPRODUCIBLE
-FACILITA COMUNICACIÓN
-**CUANTIFICA DEFIT** NEUROLOGICO
-**IDENTIFICA PACIENTES PARA REPERFUSION** FARMACOLOGICA Y MECANICA (CRIT **INCLUSION/ EXCLUSION**) Y RIESGO **COMPLICACIONES**
- **MIDE** OBJETIVAMENTE LOS **CAMBIOS CLINICOS**

https://secure.bluecloud.net/nihss-spanish/home

https://www.youtube.com/watch?v=IUXthZdi5uQ&list=TLPQMTUwNTIwMjN5XQ7_KrLs7w&index=1

D.E: ≤ 3 hs Evaluacion **Dx ≠**

Table 10.1 Possible causes of focal neurological deficit

Ischaemic stroke/transient ischaemic attack
Haemorrhagic stroke
Subarachnoid haemorrhage (with possible parenchymal involvement—meningo-cerebral haemorrhage—or cranial nerve involvement)
Subdural haematoma
Epidural haematoma
Migraine aura
Cerebral vein thrombosis
Structural intracranial lesions:
- Primary or metastatic neoplasms
- Aneursym/arteriovenous malformation

Focal epileptic seizure/Todd's paralysis
Multiple sclerosis and other inflammatory CNS diseases (sarcoidosis, vasculitis, etc.)
Metabolic disorders
- Hypo-hyperglycaemia
- Hypo-hypercalcaemia
- Hyponatraemia
- Wernicke's encephalopathy
- Central pontine myelinolysis

Infectious diseases
- Brain abscess
- Herpetic encephalitis (involvement of temporal poles), *Listeria monocytogenes* infection (brainstem involvement) or other infectious agents
- Meningitis/meningoencephalitis
- Epidural-subdural empyemas

Myasthenia
Inflammatory or compressive spinal cord disorders
Pathology of the peripheral nervous system (Guillain-Barré syndrome, mononeuritis, and radiculopathies with different aetiologies)
Hyperventilation and panic attacks Somatization disorders

Decision Algorithms for Emergency Neurology- Società Italiana di Neurologia 2021

D.E: ≤ 3 hs **EVALUACION** y **DIAGNOSTICO**

-ABCDs
-SCALAS: **NIHSS**

NEUROIMAGEN

20´-45´

OTROS **EXAMENES COMPLEMENTARIOS**:

-**GLUCEMIA** **+/- COAGULOGRAMA**(Plaquetas, RIN,kPTT s/ sospecha clínica)
-**ECG**
-**TROPONINA**
-**RX T**

D.E: ≤ 3 hs **DIAGNOSTICO: NEUROIMAGEN**

EXCLUIR **ACV H**

- PUERTA –TC (inicio).....≤ 20´
- -PUERTA-TC interpretación.....≤ 45´

All patients with suspected acute stroke should receive emergency brain imaging evaluation on first arrival to a hospital before initiating any specific therapy to treat AIS.

Systems should be established so that brain imaging studies can be performed as quickly as possible in patients who may be candidates for IV fibrinolysis or mechanical thrombectomy or both.

Noncontrast CT (NCCT) is effective to exclude ICH before IV alteplase administration.

NCCT UNICA NEROIMAGEN USADA EN **NINDS rTPA** y **ECAS III** decidir **rTPA**

Magnetic resonance (MR) imaging (MRI) is effective to exclude ICH before IV alteplase administration.

D.E: ≤ 3 hs **DIAGNOSTICO: NEUROIMAGEN**

- PUERTA –TC (inicio).....≤ 20´
- -PUERTA-TC interpretación.....≤ 45´

In patients with AIS who awake with stroke symptoms or have unclear time of onset > 4.5 hours from last known well or at baseline state, MRI to identify diffusion-positive FLAIR-negative lesions can be useful for selecting those who can benefit from IV alteplase administration within 4.5 hours of stroke symptom recognition.

IIa | B-R

WAKE UP Trial: DIFU + **> 1/3 ACM** y/o **NIHSS > 25** CI rTPA

In patients eligible for IV alteplase, because benefit of therapy is time dependent, treatment should be initiated as quickly as possible and not delayed for additional multimodal neuroimaging, such as CT and MRI perfusion imaging.

I | B-NR

Administration of IV alteplase in eligible patients without first obtaining MRI to exclude cerebral microbleeds (CMBs) is recommended.

I | B-NR

D.E: ≤ 3 hs **DIAGNOSTICO: NEUROIMAGEN MRI**

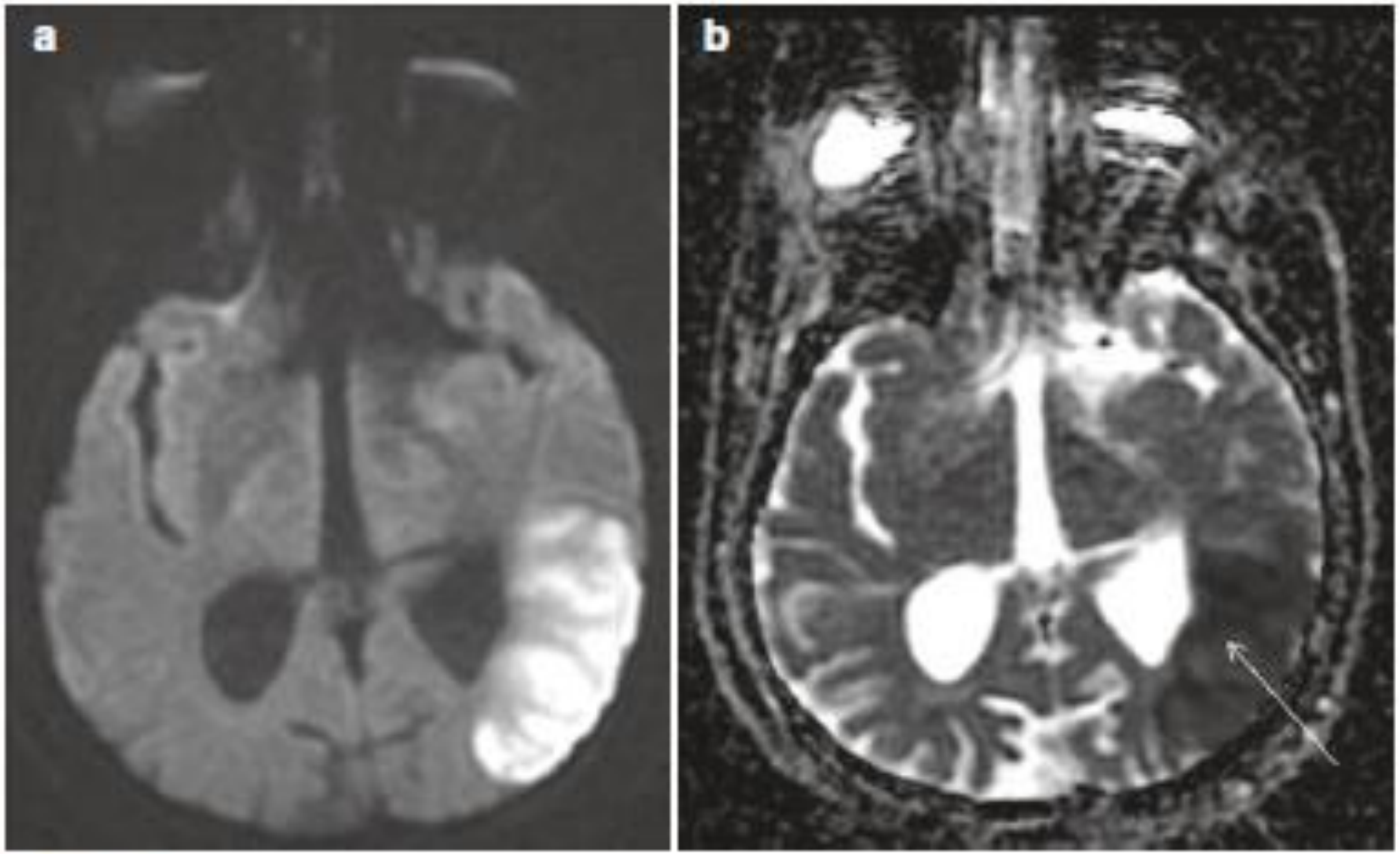


Fig. 21.6 An acute occipital-temporal infarction as captured by (**a**) diffusion-weighted imaging (DWI) and (**b**) the apparent diffusion coefficient (ADC) map

DWI +:

-Edema citotóxico aparece desde **15´-30´** isquemia

-DV: infartos peq + tronco

D.E: ≤ 3 hs **DIAGNOSTICO: NEUROIMAGEN**

For patients who otherwise meet criteria for mechanical thrombectomy, noninvasive vessel imaging of the intracranial arteries is recommended during the initial imaging evaluation.

For patients with suspected LVO who have not had noninvasive vessel imaging as part of their initial imaging assessment for stroke, noninvasive vessel imaging should then be obtained as quickly as possible (eg, during alteplase infusion if feasible).

CTA with CTP or MR angiography (MRA) with diffusion-weighted magnetic resonance imaging (DW-MRI) with or without MR perfusion is recommended for certain patients.

I A

CTA / MRA **sensibilidad 87-100%** vrs Angiografia (Gold Standard)
CTA/ MRA metodo **eleccion** trials seleccionar ptes **MT**
CTA > sensibilidad y especificidad

In patients with suspected intracranial LVO and no history of renal impairment, who otherwise meet criteria for mechanical thrombectomy, it is reasonable to proceed with CTA if indicated before obtaining a serum creatinine concentration.

IIa B-NR

In patients who are potential candidates for mechanical thrombectomy, imaging of the extracranial carotid and vertebral arteries, in addition to the intracranial circulation, may be reasonable to provide useful information on patient eligibility and endovascular procedural planning.

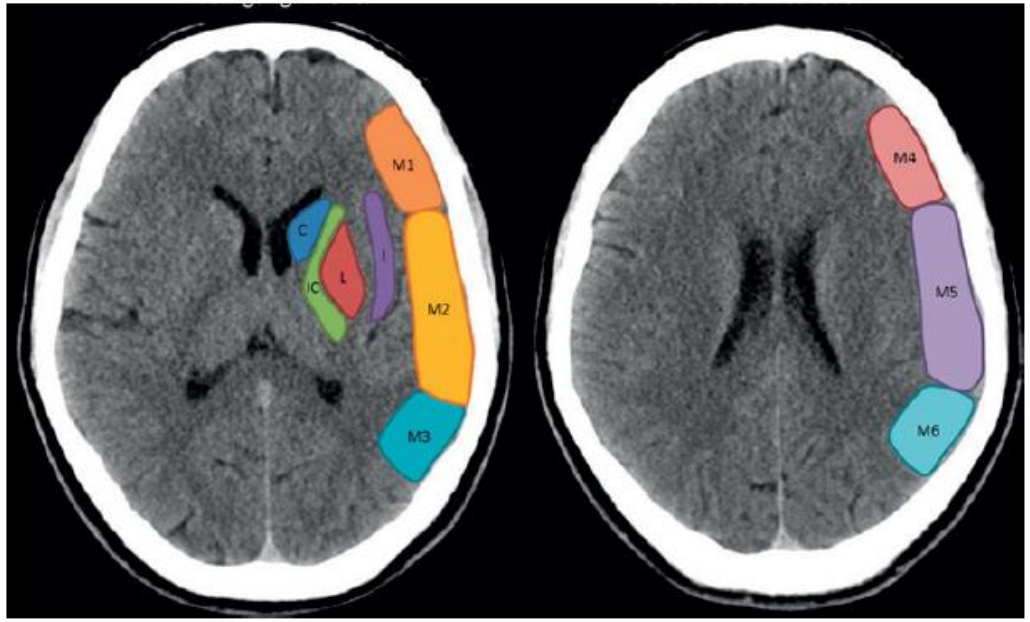
IIb C-EO

D.E: ≤ 3 hs **DIAGNOSTICO: NEUROIMAGEN**

It may be reasonable to incorporate collateral flow status into clinical decision-making in some candidates to determine eligibility for mechanical thrombectomy.

When evaluating patients with AIS within 6 hours of last known normal with LVO and an Alberta Stroke Program Early Computed Tomography Score (ASPECTS) of ≥6, selection for mechanical thrombectomy based on CT and CTA or MRI and MRA is recommended in preference to performance of additional imaging such as perfusion studies.

Imagen 1. Escala ASPECTS.



C: caudado.
IC: cápsula interna.
L: lenticular.
I: ínsula.

IIb | C-LD

I | B-NR

-divide el territorio **ACM en 10 regiones** que se evalúan en dos niveles: el **nivel ganglionar** y el **supraganglionar**.
-**cuantitativa:** puntuación **inicial 10 puntos**, se va **restando** un punto por **cada región** con evidencia de **signos precoces de isquemia** (borramiento de surcos de la convexidad, desdiferenciación córtico-subcortical, hipodensidad)
-http://ictus.sen.es/?page_id=82

D.E: ≤ 3 hs **DIAGNOSTICO: NEUROIMAGEN**

When selecting patients with AIS within 6 to 24 hours of last known normal who have LVO in the anterior circulation, obtaining CTP or DW-MRI, with or without MRI perfusion, is recommended to aid in patient selection for mechanical thrombectomy, but only when patients meet other eligibility criteria from one of the RCTs that showed benefit from mechanical thrombectomy in this extended time window.

Neuroimagenes avanzadas **CTP ó MRI DWI +/- MRIP**
delimitan CORE y **PENUMBRA**

D.E: ≤ 3 hs **EVALUACION** y **DIAGNOSTICO**

-ABCDs
-SCALAS: **NIHSS**

NEUROIMAGEN

20´-45´

OTROS **EXAMENES COMPLEMENTARIOS**:

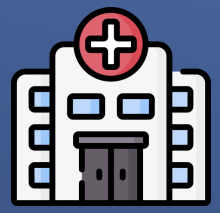
-**GLUCEMIA +/- COAGULOGRAMA**(Plaquetas, RIN,kPTT s/ sospecha clínica)
-**ECG**
-**TROPONINA**
-**RX T**

D.E: ≤ 3 hs DIAGNOSTICO: **OTROS Ex DX**

Only the assessment of blood glucose must precede the initiation of IV alteplase in all patients.	I	B-NR
Baseline electrocardiographic assessment is recommended in patients presenting with AIS but should not delay initiation of IV alteplase.	I	B-NR
Baseline troponin assessment is recommended in patients presenting with AIS but should not delay initiation of IV alteplase or mechanical thrombectomy.	I	C-LD
Usefulness of chest radiographs in the hyperacute stroke setting in the absence of evidence of acute pulmonary, cardiac, or pulmonary vascular disease is unclear. If obtained, they should not unnecessarily delay administration of IV alteplase.	IIb	B-NR

CADENA ATENCION / SUPERVIVENCIA ACV

NINDS-2003 (National Institutes of Neurological Disorders and Stroke)



ATENCION HOSPITALARIA: **ER +/- US/UCI**

REPERFUSION

EVITAR LESION SECUNDARIA

D.E: ≤ 3 hs

TRIAGE
EVALUACION

DIAGNOSTICO

TRATAMIENTO

D.E: ≤ 3 hs **TRATAMIENTO**

-Objetivo:

- salvar la PENUMBRA ISQUÉMICA

tejido cerebral **NO FUNCIONANTE** que es **POTENCIALMENTE VIABLE** si se **RESTITUYE EL FLUJO** sanguíneo dentro de cierto **LAPSO**

- evitar lesión secundaria

-TIEMPO DEPENDIENTE se reduce minuto a minuto, dando paso a un **INFARTO CEREBRAL (consolidado e irreversible)**

-Estrategias - REPERFUNDIR el vaso ocluido

– farmacológica

- mecánica

- aumentar el FLUJO COLATERAL

D.E: ≤ 3 hs **TRATAMIENTO**

TTO SOSTEN:

-''A-B'':
VA, Ventilacion, Oxigenacion

-''C'': TA

-Temperatura

-Glucemia

rTPA 1995
cambió tratamiento
ACVI **+/- EVT**
2018

-PUERTA-rTPA/AGUJA/DTN TIME/HORA ORO
≤ 45-60´

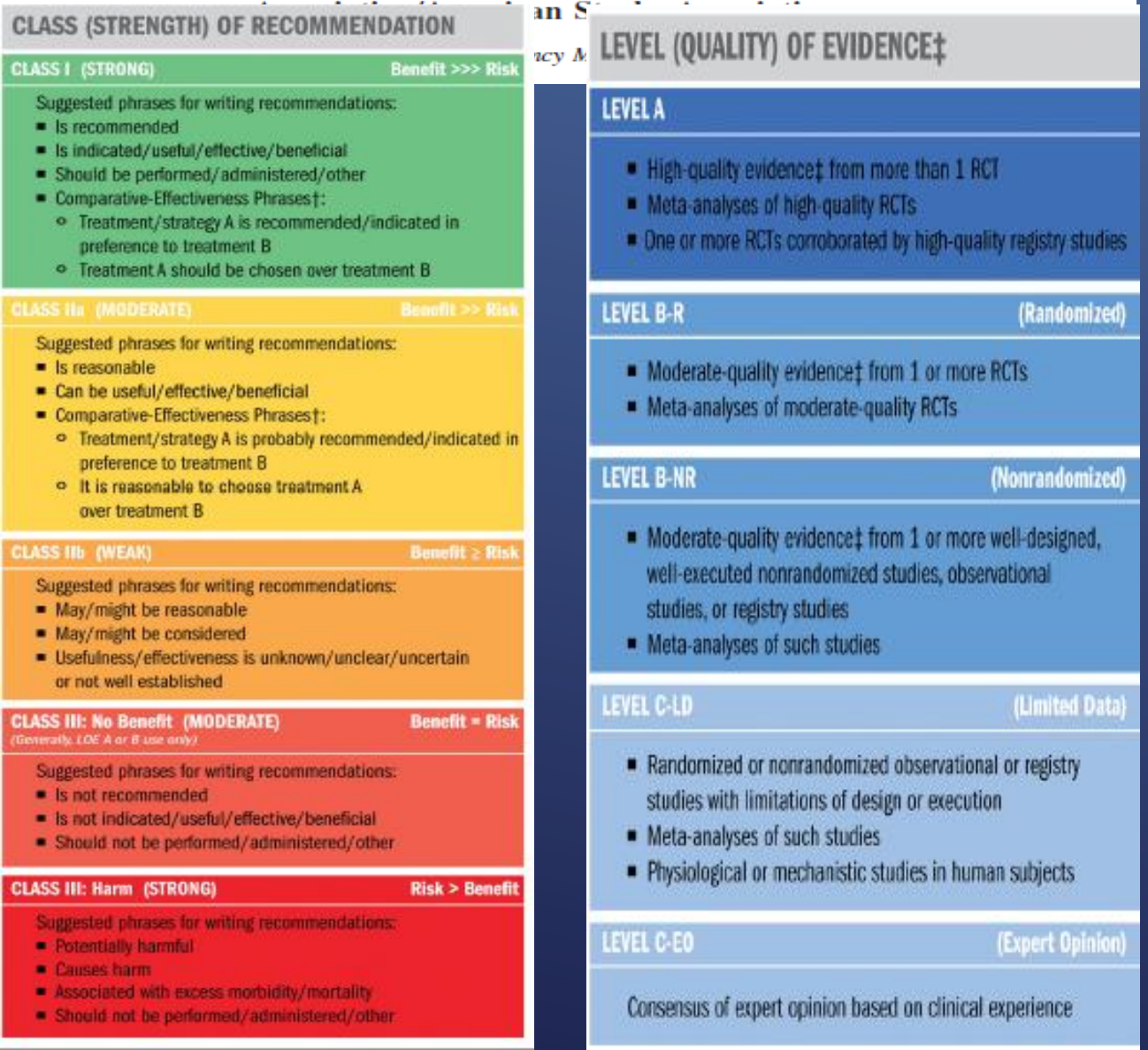
TTO SOSTEN:

-TA
-Glucemia
-Antiagregacion
-ACO
-Dislipidemia

AHA/ASA Guideline

Guidelines for the Early Management of Patients With Acute Ischemic Stroke: 2019 Update to the 2018 Guidelines for the Early Management of Acute Ischemic Stroke

A Guideline for Healthcare Professionals From the American Heart



Guideline

EUROPEAN STROKE JOURNAL

European Stroke Organisation (ESO) guidelines on intravenous thrombolysis for acute ischaemic stroke

European Stroke Journal
0(0) 1–62

DOI: 10.1177/23969873219898 65
journals.sagepub.com/home/eso
SAGE

-CALIDAD EVIDENCIA ++++
-FUERZA DE RECOMENDACIÓN fuerte /débil

Calidad de la evidencia metodología grade

Grade	Definicion
Alta ⊕⊕⊕⊕	Investigación futura es poco probable que cambie nuestra confianza en la estimación del efecto.
Moderada ⊕⊕⊕○	Investigación futura es probable que cambie nuestra confianza en la estimación del efecto.
Baja ⊕⊕○○	Investigación futura es muy probable que tenga un impacto en nuestra confianza en la estimación del efecto.
Muy baja ⊕○○○	Cualquier estimación en el efecto es muy incierto

LA FUERZA DE LAS RECOMENDACIONES SE APOYA NO SOLO EN LA CALIDAD DE LA EVIDENCIA, SINO EN UNA SERIE DE FACTORES COMO EL BALANCE ENTRE RIESGOS Y BENEFICIOS, VALORES Y PREFERENCIAS DE PACIENTES Y PROFESIONALES Y EL CONSUMO DE RECURSOS O COSTES.

rTPA: INDICACIONES

≤ 3 Horas de **INICIO** FOCO

I	A

3 a **4.5** HORAS de **INICIO** FOCO

I	B-R

Urgency	Treatment should be initiated as quickly as possible within the above listed time frames because time to treatment is strongly associated with outcomes.† (*Class I; LOE A*)

rTPA CONTRAINDICACIONES COR III

AHA 2019

ACVI MENOR (NIHSS 0 -5) **NO DISCAPACITANTE 0 - 4.5 HS** (0-3 HS LOE B-R; 3-4,5 HS LOE C LD)			
ACV I dentro de **3 MESES PREVIOS** LOE B-NR			
TC	**HIPODENSIDAD EXTENSA** (Injuria IRREVERSIBLE) **LOE A**		
	ACV HEMORRAGICO LOE C-EO		
ACV HEMORRAGICO (Historia ó sospecha HSA) LOE C - EO			
TEC GRAVE dentro **3 MESES PREVIOS** ó ACVI POST tec grave **DURANTE HOSPITALIZACION** LOE C -EO			
NEUROCIRUGIA (INTRACRANEAL ó INTRAESPINAL) dentro de **3 MESES PREVIOS** LOE C - EO			
GI: NEOPLASIA ó SANGRADO dentro de **21 DIAS PREVIOS** LOE C- EO			
COAGULACION	Plaquetas **< 100.000/ mm ^{3}**; **RIN > 1.7**; **aPTT > 40 seg ó PT < 15 seg**		
	HBPM dosis **TTO** cumplidas **24 Hs previas** LOE B - NR		
	INHIBIDORES TROMBINA ó FACTOR Xa LOE C- EO **EXCEPTO** plaquetas, **aPTT, RIN, Tiempo Coagulacion** con **Ecarina, Tiempo Trombina ó dosaje actividad Xa** sean **NORMALES ó** los pacientes **NO** hayan recibido **DOSIS** de estos fármacos **> 48 HS** asumiendo **METABOLIZACION RENAL NORMAL**		
	ANTIAGREGANTES LOE B- R	**ABCIXIMAB** administracion **SIMULTANEA** con rTPA	
		ASPIRINA EV DENTRO 90 min INICIO rTPA	
ENDOCARDITIS INFECCIOSA LOE C - LD			
DISECCION ARCO AORTICO LOE C- EO			
NEOPLASIA INTRACRANEAL INTRAAXIAL LOE C - EO			

rTPA CONSENTIMIENTO

Because of this proven benefit and the need to expedite treatment, when a patient cannot provide consent (eg, aphasia, confusion) and a legally authorized representative is not immediately available to provide proxy consent, it is justified to proceed with IV thrombolysis in an otherwise eligible adult patient with a disabling AIS. In a recent

r TPA INDICACIONES COR I / II A / IIB

AHA 2019

URGENCIA TTO: LO ANTES POSIBLE **MEJORA OUTCOMES LOE A**		
VENTANA	**DENTRO 3 Hs**	EDAD > **18** años **SIN LIMITE EDAD LOE A**
		ACVI SEVERO (NIHSS > 25) aunque hay > **RIESGO** de **transformación hemorragica LOE A**
		ACVI MENOR (NIHSS 0-5) DISCAPACITANTE LOE B - R
	3 - 4.5 HS	EDAD **≤ 80 AÑOS SIN** AP de **DM NI ACVI (AMBAS) NI ANTICOAGULANTES** orales, **NIHSS ≤ 25, SIN** injuria cerebral > **1/3** territorio **ACM** LOE B-R
		EDAD > **80 AÑOS COR II A** LOE B- NR
		AP **DM y ACVI COR II B** - LOE B - NR
		ACVI SEVERO (NIHSS > 25) COR IIB- LOE C-LD
		ACVI MENOR (NIHSS 0-5) DISCAPACITANTE COR IIB-LOE B -NR
		DISECCION ARTERIAL EXTRACRANEAL CERVICAL COR IIA -LOE C-LD
	ACVI DEL DESPERTAR / TIEMPO INICIO DESCONOCIDO	**RM DW +** area < **a 1/3** territorio **ACM y FLAIR NEGATIVO COR IIA - LOE B-R**
TC Simple	**TC Simple CAMBIOS ISQUEMICOS TEMPRANOS ó HIPODENSIDAD** (Injuria Leve ó Moderada) extension < **1/3 ACM LOE A**	
	SIGNO CUERDA ACM (HIPERDENSIDAD) **COR IIA - LOE B - NR**	
TA < 185 / 110 mmHg LOE B - NR		
GLUCEMIA	**GLUCEMIA** > 50 mg% **LOE A**	
	INICIAL < 50 ó > 400 mg % **CORREGIDA COR IIB** - LOE C-LD	
COAGULACION	**ANTIAGREGACION**	**MONOTERAPIA** PREVIA **LOE A**
		DUAL (Aspi + Clopi) LOE B - NR
	Pte **ACO** con **WARFARINA** y **RIN ≤ 1.7** ó **PT < 15 seg COR II B-** LOE B- NR	
INSUFICIENCIA RENAL en **HEMODIALISIS** y **aPTT NORMAL** LOE C - LD		

r TPA INDICACIONES COR II A / IIB

AHA 2019

MEJORIA TEMPRANA del FOCO **MODERADO / SEVERO** (NIHSS) pero **DISCAPACITANTE COR IIA - LOE A**		
CONVULSIONES como manifestacion **INICIAL** ACVI y **persistencia foco** post ictal **DESCARTANDO FENOMENOS POSTICTALES COR IIA- LOE C-LD**		
ANEURISMA INTRACRANEAL (NO ROTO)	**< 10 mm** (pequeño / moderado) **COR IIA - LOE C-LD**	
	> 10 mm COR IIB - LOE C-LD	
MICROSANGRADOS CEREBRALES PREVIOS (RM)	**< 10 COR IIA - LOE B-NR**	
	> 10 COR IIB - LOE B- NR	
DISECCION arterial **INTRACRANEAL: RIESGO HEMORRAGICO COR IIB - LOE C-LD**		
NEOPLASIA INTRACRANEAL EXTRAAXIAL COR IIA - LOE C-EO		
IAM	**SIMULTANEO CON ACV**	**rTPA (ACVI) SEGUIDO CCG COR IIA - LOE C-EO**
	ULTIMOS 3 MESES	**NO STEMI COR IIA - LOE C-LD**
		STEMI CARA INFERIOR O DERECHA COR IIA - LOE C- LD
		STEMI CARA ANTERIOR COR IIB - LOE C- LD
ACVI PROCEDIMENTAL (complicacion post Angiografia cerebral ó cardiaca) **COR IIA- LOE A**		
OFTALMOPATIAS HEMORRAGICAS (RETINOPATIA DBT HEMORRAGICA) s/ Riesgo/ Beneficio **COR IIA - LOE B-NR**		
MENSTRUACION	**SIN** AP **METRORRAGIA puede AUMENTAR FLUJO MENSTRUAL COR IIA - LOE C-EO**	
	CON AP **METRORRAGIA ACTIVA** ó **RECIENTE SIN ANEMIA SINTOMATICA** ó **HIPOTENSION COR IIB - LOE C-LD**	
	AP **ANEMIA SINTOMATICA** por **SANGRADO VAGINAL ACTIVO** ó **RECIENTE** evaluacion **PREVIA URGENTE** por **Ginecologia ANTES** rTPA **COR IIA-LOE C-EO**	
ANEMIA FALCIFORME COR IIA - LOE B-NR		
ACVI asociado **CONSUMO ILICITO DROGAS COR IIA - LOE C-LD**		
Ptes **ACVI MIMIC (PSEUDO ACVI)** que **reciben rTPA** tienen **bajísimo riesgo de Hemorragia Intracraneal SINTOMATICA; ante la duda iniciar rTPA** (TIEMPO ES CEREBRO) **COR IIA - LOE B-NR**		

r TPA INDICACIONES COR IIB

AHA 2019

MAV SIN TTO s RIESGO / BENEFICIO COR II B - LOE C-LD	
PUNCION LUMBAR 7 DIAS PREVIOS COR IIB - LOE C-EO	
PUNCION ARTERIAL de **VASO NO COMPRESIBLE 7 DIAS PREVIOS COR IIB - LOE C-EO**	
CIRUGIA ó **TRAUMA MAYOR (NO TEC) RECIENTE** (DENTRO 14 DIAS) según **RIESGO/BENEFICIO COR IIB - LOE C-LD**	
SANGRADO GI ó **GenitoUrinario > 21 DIAS COR IIB - LOE C-LD**	
NEOPLASIA SISTEMICA y **ESPERANZA** de **VIDA > 6 MESES SIN CI rTPA COR IIB - LOE C-LD**	
EMBARAZO	**ACVI MODERADO/SEVERO** s **RIESGO** (sangrado uterino Vrs discapacidad neurol)**/BENEFICIO COR IIB -LOE C-LD**
	PUERPERIO TEMPRANO (< 14 DIAS) **COR IIB -LOE C-LD**
DISCAPACIDAD PREEXISTENTE (mRS ≥ 2/ DEMENCIA) NO AUMENTA riesgo **HIPE, SI** se asocia a **< MEJORIA FOCO** y **> MORTALIDAD. INDIVIDUALIZAR** la indicacion según **QOL, preferencias pte y flia, soporte cuidado. COR IIB- LOE B-NR**	
CARDIOPATIAS	**PERICARDITIS AGUDA** y **ACVI MODERADO/SEVERO** s **RIESGO/BENEFICIO** e **IC CARDIOLOGO URGENTE COR IIB-LOE C-EO**
	TROMBO AURICULAR ó **VENTRICULAR IZQ** y **ACVI MODERADO/SEVERO** s **RIESGO/BENEFICIO COR IIB - LOE C-LD**
	MIXOMA y **ACVI MAYOR/SEVERO COR IIB - LOE C-LD**
	FIBROELASTOMA PAPILAR y **ACVI MAYOR/SEVERO COR IIB - LOE C-LD**
COADMINISTRACION ANTIAGREGANTES INHIBIDORES Rc IIb/IIIa (Tirofiban/Epifibatide) **COR IIB - LOE B-NR**	

rTPA: ADMINISTRACION

- **DOSIS** : **0.9 mg/kg**

- **DOSIS MÁXIMA** **90 mg**

- **DISTRIBUCIÓN DE LA DOSIS** :

10% en **BOLO** EV en **UN MINUTO**

90% en **INFUSIÓN CONTINUA** durante **UNA HORA**

- **MONITOREO TA y NIHSS**:

*c 15 min durante la **INFUSIÓN** y hasta **2 HORAS POSTERIORES**

* luego **c 30 min** por **6 horas**

* **c 1 hora** hasta **24 horas** de la infusión

https://cima.aemps.es/cima/dochtml/ft/59494/FT_59494.html#5-propiedades-farmacol-gicas

rTPA: ADMINISTRACION

SUSPENDER infusión y **TC Encefalo** Control si:
-Cefalea severa
-Hipertensión aguda
-Nauseas / Vomitos
-Deterioro estado consciencia
- Hemorragia mayor

Evitar colocación de SNG, Sonda Vesical o TAM, de estar indicados recordar farmacocinética

Neuroimagen control (CT/ MRI) **24 horas post** rTPA **ANTES** ACO/ Antiagregantes

FD: activador recombinante del plasminógeno tisular humano, que activa directamente el plasminógeno a plasmina. Permanece relativamente inactivo en el sistema circulatorio. Una vez se conjuga con la fibrina, es activada, induciendo la conversión del plasminógeno en plasmina, lo cual produce la disolución del coágulo de fibrina.

FC: Metabolsimo hepatico
La vida media plasmática relevante, t1/2 alfa es de 4 - 5 minutos

rTPA: COMPLICACIONES

MANEJO SANGRADO INTRACRANIAL SINTOMATICO DENTRO 24 HS POST rTPA

COR IIb	LOE C-EO
Stop alteplase infusion	
CBC, PT (INR), aPTT, fibrinogen level, and type and cross-match	
Emergent nonenhanced head CT	
Cryoprecipitate (includes factor VIII): 10 U infused over 10–30 min (onset in 1 h, peaks in 12 h); administer additional dose for fibrinogen level of <150 mg/dL	
Tranexamic acid 1000 mg IV infused over 10 min OR ε-aminocaproic acid 4–5 g over 1 h, followed by 1 g IV until bleeding is controlled (peak onset in 3 h) (Potential for benefit in all patients, but particularly when blood products are contraindicated or declined by patient/family or if cryoprecipitate is not available in a timely manner.)	
Hematology and neurosurgery consultations	
Supportive therapy, including BP management, ICP, CPP, MAP, temperature, and glucose control	

MANEJO ANGIOEDEMA OROLINGUAL

COR IIb	LOE C-EO
Maintain airway	
Endotracheal intubation may not be necessary if edema is limited to anterior tongue and lips.	
Edema involving larynx, palate, floor of mouth, or oropharynx with rapid progression (within 30 min) poses higher risk of requiring intubation.	
Awake fiberoptic intubation is optimal. Nasal-tracheal intubation may be required but poses risk of epistaxis after IV alteplase. Cricothyroidotomy is rarely needed and also problematic after IV alteplase.	
Discontinue IV alteplase infusion and hold ACE inhibitors	
Administer IV methylprednisolone 125 mg	
Administer IV diphenhydramine 50 mg	
Administer ranitidine 50 mg IV or famotidine 20 mg IV	
If there is further increase in angioedema, administer epinephrine (0.1%) 0.3 mL subcutaneously or by nebulizer 0.5 mL	
Icatibant, a selective bradykinin B_2 receptor antagonist, 3 mL (30 mg) subcutaneously in abdominal area; additional injection of 30 mg may be administered at intervals of 6 h not to exceed a total of 3 injections in 24 h; and plasma-derived C1 esterase inhibitor (20 IU/kg) has been successfully used in hereditary angioedema and ACE inhibitor-related angioedema	
Supportive care	

TROMBECTOMIA MECANICA (MT): GENERALIDADES

Patients eligible for IV alteplase should receive IV alteplase even if mechanical thrombectomy is being considered.

I	A

Guideline

European Stroke Organisation – European Society for Minimally Invasive Neurological Therapy expedited recommendation on indication for intravenous thrombolysis before mechanical thrombectomy in patients with acute ischaemic stroke and anterior circulation large vessel occlusion

EUROPEAN STROKE JOURNAL

European Stroke Journal
2022, Vol. 0(0) 1–26

DOI: 10.1177/23969873221076968
journals.sagepub.com/home/eso
SAGE

IV Thrombolysis Initiated Before Transfer for Endovascular Stroke Thrombectomy

A Systematic Review and Meta-analysis

Neurology 2023

TROMBECTOMIA MECANICA (MT): GENERALIDADES

ERM		
Nivel	Grado de incapacidad	
0	Asintomático	
1	Muy leve	Pueden realizar tareas y actividades habituales, sin limitaciones.
2	Leve	Incapacidad para realizar algunas actividades previas, pero pueden valerse por sí mismos, sin necesidad de ayuda.
3	Moderada	Requieren algo de ayuda, pero pueden caminar solos.
4	Moderadamente grave	Dependientes para actividades básicas de la vida diaria, pero sin necesidad de supervisión continuada (necesidades personales sin ayuda).
5	Grave	Totalmente dependientes. Requieren asistencia continuada.
6	Muerte	

https://tiempoescerebro.com/wpcontent/uploads/2017/06/rankin-modificada.pdf

The technical goal of the thrombectomy procedure should be reperfusion to a modified Thrombolysis in Cerebral Infarction (mTICI) grade 2b/3 angiographic result to maximize the probability of a good functional clinical outcome.	I	A

TROMBECTOMIA MECANICA (MT): VENTANAS

0 a 6 HS

6 a 24 HS

6 a 16

16 a 24

MT Indicaciones 0 a 6 Hs

Patients should receive mechanical thrombectomy with a stent retriever if they meet all the following criteria: (1) prestroke mRS score of 0 to 1; (2) causative occlusion of the internal carotid artery or MCA segment 1 (M1); (3) age ≥18 years; (4) NIHSS score of ≥6; (5) ASPECTS of ≥6; and (6) treatment can be initiated (groin puncture) within 6 hours of symptom onset.	I	A

EDAD: -**EFECTIVA** EN **> 80** AÑOS

-EVALUACION DE **RIESGO** (COMORBILIDADES) **BENEFICIO** EN **> 90** AÑOS

MT Indicaciones 0 a 6 Hs

Although the benefits are uncertain, the use of mechanical thrombectomy with stent retrievers may be reasonable for carefully selected patients with AIS in whom treatment can be initiated (groin puncture) within 6 hours of symptom onset and who have causative occlusion of the MCA segment 2 (M2) or MCA segment 3 (M3) portion of the MCAs.	IIb	B-R
Although its benefits are uncertain, the use of mechanical thrombectomy with stent retrievers may be reasonable for patients with AIS in whom treatment can be initiated (groin puncture) within 6 hours of symptom onset and who have prestroke mRS score >1, ASPECTS <6, or NIHSS score <6, and causative occlusion of the internal carotid artery (ICA) or proximal MCA (M1).	IIb	B-R
Although the benefits are uncertain, the use of mechanical thrombectomy with stent retrievers may be reasonable for carefully selected patients with AIS in whom treatment can be initiated (groin puncture) within 6 hours of symptom onset and who have causative occlusion of the anterior cerebral arteries, vertebral arteries, basilar artery, or posterior cerebral arteries.	IIb	C-LD

MT Indicaciones 6 a 24 Hs

In selected patients with AIS within 6 to 16 hours of last known normal who have LVO in the anterior circulation and meet other DAWN or DEFUSE 3 eligibility criteria, mechanical thrombectomy is recommended.	I	A
In selected patients with AIS within 16 to 24 hours of last known normal who have LVO in the anterior circulation and meet other DAWN eligibility criteria, mechanical thrombectomy is reasonable.	IIa	B-R
In the 6- to 24-hour thombectomy window evaluation and treatment should proceed as rapidly as possible to ensure access to treatment for the greatest proportion of patients.	I	B-R

DEFUSE 3: MT 6 -16 hs PERFUSION - CORE MISMATCH

Albers GW et al. -2018

Inclusion criteria	Yes	No
Age 18–90 years	☐	☐
Occlusion of the intra- and/or extracranial internal carotid artery (ICA) and/or M1 segment of the middle cerebral artery (MCA M1)	☐	☐
mRS pre-stroke 0–2; life expectancy ≥6 months	☐	☐
NIHSS ≥6	☐	☐
Ischaemic core <70 ml + penumbra >15 ml (*T*max >6 s) + penumbra/core mismatch >1.8[a]	☐	☐

[a]CT perfusion or MR DW/PW, using image postprocessing software

OUTCOME FUNCIONAL 90 DIAS mRS 0-2 **44.6%** vrs **16.7%**

SUSPENDIDO TEMPRANAMENTE , PUEDE **SOBREESTIMAR** EFECTO TTO

DAWN: MT 16 – 24 hs CLINICAL - CORE MISMATCH

Nogueira RG et al -2018

Inclusion criteria	Yes	No
Age ≥18 years	☐	☐
Occlusion of the terminal tract of the internal carotid artery (ICA) and/or M1 segment of the middle cerebral artery (MCA M1)	☐	☐
mRS pre-stroke 0–1; life expectancy ≥6 months	☐	☐
NIHSS ≥10	☐	☐
Clinical/imaging mismatch[a]: • Age ≥80 years, NIHSS score ≥10, and ischaemic core <21 ml • Age <80 years, NIHSS score ≥10, and ischaemic core <31 ml • Age <80 years, NIHSS score ≥20, and ischaemic core <51 ml	☐	☐

[a]CT perfusion or MR DW/PW, using image postprocessing software

OUTCOME FUNCIONAL 90 DIAS mRS 0-2 **49%** vrs **13%**

SUSPENDIDO TEMPRANAMENTE , PUEDE **SOBREESTIMAR** EFECTO TTO

ACVI INICIO INCIERTO (ACVII) Y REPERFUSION VENTANA EXTENDIDA

- 30% ACVI ER
- DURANTE SUEÑO/ ACV DEL DESPERTAR
- DURANTE VIGILIA PERO SE DESCONOCE LA HORA DEL MISMO

HORA DE INICIO = ULTIMA HORA VISTO ASINTOMATICO

 # REPERFUSION VENTANA EXTENDIDA:

-rTPA > 4,5 hs

-TM > 6 HS

 # MARCADORES TISULARES/ BIOMARCADORES: NEUROIMAGEN

-RM: DW (**edema citotoxico**)/FLAIR(edema **vasogenico**):

DW **+** y FLAIR **-** = **ISQUEMIA < 4.5 HS**

-PERFUSION CEREBRAL POR RM O TC : determina área

-Oligohemia asint

-Penumbra sint: tejido viable **reperfusion: T MAX > 6 seg**

-Core Infarto: daño **irreversible: CBF < 30%**

CONCLUSION

TIEMPO RELOJ

TIEMPO TISULAR

-VOLUMEN INFARTO :

-TPO RELOJ OCLUSION

-COLATERALES

-IMPORTANCIA FUNCIONAL DEL AREA AFECTADA

-EDAD BIOLOGICA: CRONOLOGICA vrs FUNCIONAL

ACVI PREVENCION SECUNDARIA

-TA objetivo **<130/80** mmHg reduce el riego de recurrencia Stroke (ACVI ó AIT)
Calidad evidencia : **Moderada** ⊕⊕⊕
Fuerza recomendacion: **Debil** ↑?

Guideline on pharmacological interventions for long-term secondary prevention after ischaemic stroke or transient ischaemic attack- ESO- 2022

In patients with BP ≥220/120 mm Hg who did not receive IV alteplase or mechanical thrombectomy and have no comorbid conditions requiring urgent antihypertensive treatment, the benefit of initiating or reinitiating treatment of hypertension within the first 48 to 72 hours is uncertain. It might be reasonable to lower BP by 15% during the first 24 hours after onset of stroke.	IIb	C-EO

4. In patients with BP <220/120 mm Hg who did not receive IV alteplase or mechanical thrombectomy and do not have a comorbid condition requiring urgent antihypertensive treatment, initiating or reinitiating treatment of hypertension within the first 48 to 72 hours after an AIS is not effective to prevent death or dependency.	III: No Benefit	A

ACVI PREVENCION SECUNDARIA

-LDL Colesterol **< 70 mg/dl** reduce el riesgo de eventos CV mayores.
Calidad evidencia: **Moderada** ⊕⊕⊕
Fuerza de recomendatcion: **Fuerte** ↑↑

-**Estatinas** hipolipemiante elección
Calidad evidence: **Alta** ⊕⊕⊕⊕
Fuerza recommendation: **Fuerte**↑↑

Guideline on pharmacological interventions for long-term secondary prevention after ischaemic stroke or transient ischaemic attack- ESO- 2022

Among patients already taking statins at the time of onset of ischemic stroke, continuation of statin therapy during the acute period is reasonable.	IIa	B-R
For patients with AIS who qualify for statin treatment, in-hospital initiation of statin therapy is reasonable.	IIa	C-LD

ACVI PREVENCION SECUNDARIA

-**Antiagregacion plaquetaria** a largo plazo se recomienda ACVI/TIA
Calidad evidencie: **Moderate** ⊕⊕⊕
Fuerza recomendacion: **Strong for intervention** ↑↑

-NO se recomienda el uso **doble antiagrehacion** (aspirina y clopidogrel) a **largo plazo si** se recomienda **antiagregacion** simple .
Evidencia: **Muy Baja** ⊕

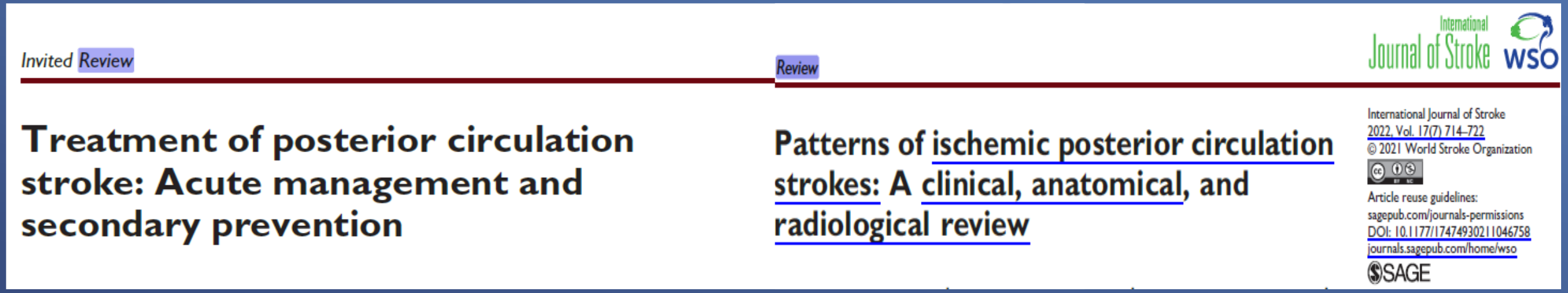
Recomendacion: Debil

Guideline on pharmacological interventions for long-term secondary prevention after ischaemic stroke or transient ischaemic attack- ESO- 2022

Administration of aspirin is recommended in patients with AIS within 24 to 48 hours after onset. For those treated with IV alteplase, aspirin administration is generally delayed until 24 hours later but might be considered in the presence of concomitant conditions for which such treatment given in the absence of IV alteplase is known to provide substantial benefit or withholding such treatment is known to cause substantial risk.	I	A	160-300 mg

ACVI PREVENCION SECUNDARIA

. Hypoglycemia (blood glucose <60 mg/dL) should be treated in patients with AIS.	I	C-LD
. Evidence indicates that persistent in-hospital hyperglycemia during the first 24 hours after AIS is associated with worse outcomes than normoglycemia, and thus, it is reasonable to treat hyperglycemia to achieve blood glucose levels in a range of 140 to 180 mg/dL and to closely monitor to prevent hypoglycemia.	IIa	C-LD



Invited Review

Treatment of posterior circulation stroke: Acute management and secondary prevention

Review

Patterns of ischemic posterior circulation strokes: A clinical, anatomical, and radiological review

International Journal of Stroke
2022, Vol. 17(7) 714–722

DOI: 10.1177/17474930211046758
journals.sagepub.com/home/wso
SAGE

-Focalizacion **clínica** y la **gravedad** es **muy variable**

-**MR** es neuroimagen **elección con pc ASPECTS: repetir si** sospecha clínica y es negativa

-**No** hay **demasiada evidencia tto reperfusion**

-**Trombolisis = beneficios y <** riesgo **hemorragia** que Circuito Anterior

-**MT** eficaz en obstrucciones **Art Basilar**, resto territorios es incierto

-Craniectomia Descompresiva puede ser beneficiosa

Leading Opinion

International Journal of Stroke WSO

International Journal of Stroke
0(0) 1–8

Tenecteplase for the treatment of acute ischemic stroke: A review of completed and ongo controlled trials

ls Analysis

Sonia Alamowitch[1], Guillaume Turc[2,3,4,5], Lina Palaiodimou[6], Andrew Bivard[7], Alan Cameron[8], Gian Marco De Marchis[9,10], Annette Fromm[11], Janika Kõrv[12], Melinda B Roaldsen[13], Aristeidis H Katsanos[14] and Georgios Tsivgoulis[6*]

Graciasssssssss