CLINICAL PRACTICE GUIDELINE FOR DIAGNOSIS AND THERAPY FOR ACUTE STAGE OF ISCHEMIC CEREBROVASCULAR ACCIDENT

- **Title:** Clinical Practice guideline for diagnosis and therapy for acute stage of ischemic cerebrovascular accident.
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- **Abstract:**

Objective: to provide evidence-based clinical recommendations for diagnosis and therapy for acute stage of ischemic cerebrovascular accident in EsSalud Social Security. Materials and methods: a guideline task force (GTF) was formed with specialized physicians and methodologists. The group proposed 8 clinical questions to be answered in this Clinical practice guideline (CPG). Systematic searches of preview reviews were performed and when it was necessary, primary studies from Medline and Cochrane Controlled Register of Trials for 2018 were reviewed. The evidence was selected aiming to answer each proposed question. Certainty of evidence was evaluated using Grading of Recommendations Assessment, Development, and Evaluation (GRADE) methodology. In periodical work sessions, the group used GRADE methodology for reviewing the evidence and formulated recommendations, good clinical practice items and the flowchart for diagnosis and management. Finally, the CPG was approved by Resolution Nº 128-IETSI-ESSALUD-2019. Results: This CPG approached 8 clinical questions, divided into four topics: screening, diagnosis, therapy, support and rehabilitation. Based on these questions; 28 recommendations (8 strong and 20 conditional), 38 good clinical practice items, 1 implementation note and 2 flowcharts were formulated.

- **PICO questions for CPG:**

DIAGNOSIS			
Question 1: In people with focal neurologic deficits, which scales are the most effective for establishing the initial suspicion of ischemic cerebrovascular accident (iCVA)?			
POPULATION	**INTERVENTION**	**COMPARATOR**	**OUTCOME(S)**
Patients with CVA	LAPSS, FAST, CPSS y OPSS scales	Discharge diagnosis	Sensitivity, specificity, Positive and Negative Likelihood ratios, ORD and ABC.
Question 2: In patients with high suspicion of iCVA, which imaging tests are the most useful for diagnosis in patient up to 18 years old?			

POPULATION	INTERVENTION	COMPARATOR	OUTCOME(S)
Patients with suspicion of CVA	Magnetic resonance imaging	Axial Computed Tomography	Sensitivity, specificity, Positive and Negative Likelihood ratios, ORD and ABC.
Patients with suspicion of CVA	Computed Tomography Perfusion	Magnetic resonance imaging	Sensitivity, specificity, Positive and Negative Likelihood ratios, ORD and ABC.

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ASSESSMENT OF THE SEVERITY			
Question 3: In patients with iCVA, which scales are the most useful to assess the severity of the ischemic cerebrovascular accident?			
POPULATION	**INTERVENTION**	**COMPARATOR**	**OUTCOME(S)**
Patients with CVA	Diagnostic scale	Clinical diagnosis of CVA	Sensitivity, specificity, Positive and Negative predictive values

THERAPY			
Question 4: In patients with iCVA, which reperfusion therapy is the most effective and safe?			
POPULATION	**INTERVENTION**	**COMPARATOR**	**OUTCOME(S)**
Patients with ischemic CVA	Intravenous thrombolysis	Standard therapy	- Mortality - Dependence - Intracerebral hemorrhage
Patients with large vessel ischemic CVA	Mechanical Thrombectomy	Intravenous thrombolysis	- Mortality - Dependence - Intracerebral hemorrhage
Question 5: In patients with iCVA, which therapies until reperfusion (secondary prevention) are the most effective and safe?			
POPULATION	**INTERVENTION**	**COMPARATOR**	**OUTCOME(S)**
Patients with CVA	Continuous monitoring	Intermittent monitoring	- Mortality - Disability - Length of hospital stay.

Patients with CVA	Manipulation of blood pressure	Not manipulate	- Mortality - Disability - Neurological impairment
Patients with CVA	Continuous glucose monitoring	Not intervene	- Mortality - Disability - Neurological impairment - Adverse events
Patients with CVA	Therapeutic hypothermia	Normothermia	- Mortality - Disability - Neurological impairment - Adverse events
Patients with CVA	Antiaggregants	Placebo	- Mortality - Disability - Neurological impairment - Adverse events - CVA recurrence
Patients with CVA	Double Antiaggregation	Simple Antiaggregation	- CVA recurrence - Vascular events - Adverse events
Patients with CVA	Anticoagulation	Placebo	- Mortality - Disability - Adverse events - CVA recurrence
Patients with CVA	Anticoagulation	Antiaggregants	- Mortality - Disability - CVA recurrence - Adverse events
Patients with CVA	Statins	Placebo	- Mortality - Disability - CVA recurrence - Adverse events
Question 6: In patients with iCVA, which neuroprotective strategies are the most effective and safe?			
POPULATION	**INTERVENTION**	**COMPARATOR**	**OUTCOME(S)**

Patients with CVA	Citicoline	Placebo	- Mortality - Dependence - Adverse effects
Patients with CVA	Magnesium sulfate	Placebo	- Functional independence - Adverse effects
Patients with CVA	Mannitol	Placebo	- Mortality - Clinical worsening
Patients with CVA	Hemodilution	Placebo	- Mortality - Dependence
Patients with CVA	Stem cell	Placebo	- Mortality - Clinical Improvement

Question 7: In patients with iCVA, is surgical intervention (craniotomy or hemicraniectomy) effective and safe versus standard therapy?

POPULATION	INTERVENTION	COMPARATOR	OUTCOME(S)
Patients with CVA with extensive infarct or malignant infarction complicated with cerebral edema.	Decompressive surgery	Medical therapy or placebo	- Mortality - Disability - Quality of life - Adverse events

Question 8: In patients with iCVA, which interventions are the most effective and safe for rehabilitation in patients with ischemic arterial cerebrovascular during the first 15 days after the onset of symptoms?

POPULATION	INTERVENTION	COMPARATOR	OUTCOME(S)
Patients with CVA	Systematic nasogastric tube	Restrictive use	- Mortality - Poor outcome
Patients with CVA	Nutritional complements	Do not use	- Mortality - Pressure ulcer
Patients with CVA	Speech and language therapy	Do not use	- Functional communication - Reading comprehension - Nomination
Patients with CVA	Dysphagia management	Do not use	- Mortality - Dysphagia - Pneumonia

Patients with CVA	Start rehabilitation	Do not use	- Mortality - Independence

- **Key words:** Stroke; Practice Guidelines as Topic; GRADE Approach; Evidence-Based Medicine (MeSH-NLM)