Stroke Assessment

The Cincinnati Prehospital Stroke Scale

Facial Droop
(have patient show teeth or smile)

- NORMAL
  - Both sides of face move equally.
- ABNORMAL
  - One side of face does not move as well as the other side.

Arm Drift
(patient closes eyes and extends both arms straight out, with palms up for 10 seconds)

- NORMAL
  - Both arms move the same or both arms do not move at all.
- ABNORMAL
  - One arm does not move or one arm drifts down compared with the other.

Abnormal Speech
(have the patient say “you can’t teach an old dog new tricks”)

- Normal
  - Patient uses correct words with no slurring.
- Abnormal
  - Patient slurs words, uses the wrong words, or is unable to speak.

If any 1 of these 3 signs is abnormal, the probability of a stroke is 72%
Identify Signs and Symptoms of Possible Stroke

Active Emergency Response

Suspected Stroke Algorithm:
Goals for Management of Stroke

Critical EMS assessments and actions

**Provide oxygen if O₂ sat < 94%**

Support ABCs: Give Oxygen if indicated
Perform prehospital stroke assessment
Check glucose
Establish time of symptom onset (last normal)
Triage to stroke center
Alert hospital
Activate stroke team

NINDS TIME GOALS

Immediate general assessment and stabilization*

- Assess ABCs, vital signs
- Provide oxygen if O₂ sat < 94%
- Obtain IV access and perform laboratory assessments
- Check glucose; treat if indicated
- Obtain 12-lead ECG
- Perform neurologic screening assessment
- Order emergent CT without contrast

Immediate neurologic assessment by stroke team or designee

- Review patient history
- Establish time of symptom onset or last known normal
- Perform neurologic examination (NIH Stroke Scale or Canadian Neurological Scale)

Does CT Scan Show Hemorrhage?

No hemorrhage

Probably acute ischemic stroke; consider fibrinolytic therapy

- Check fibrinolytic exclusions
- Repeat neurologic exam: are deficits rapidly improving to normal?

Patient remains candidate for fibrinolytic therapy?

- Review risks/benefits with patient & family.
  - If acceptable:
    - Give rTPA**
    - No anticoagulants or antiplatelet treatment for 24 hours

Candidate*

- Begin post-rTPA stroke pathway
- Aggressively monitor:
  - BP per protocol
  - For neurologic deterioration
- Emergent admission to stroke unit or intensive care unit

Hemorrhage

Consult neurologist or neurosurgeon; consider transfer if not available.

- Begin stroke or hemorrhage pathway
- Admit to stroke unit or intensive care unit

Patient remains candidate for fibrinolytic therapy?

Not a candidate

Administer aspirin


If onset > 3 hours consider triage to hospital with interventional capabilities for stroke.