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%.
Suspected Stroke Algorithm: Goals for Management of Stroke

Identify Signs and Symptoms of Possible Stroke
Active Emergency Response

Critical EMS assessments and actions

- 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

TIME GOALS
- Within 15 min of ED Arrival
- Within 20 min of ED Arrival
- Within 45 min of ED Arrival
- Within 60 min of ED Arrival

Immediate general assessment and stabilization*

- Assess ABCs, vital signs
- Provide oxygen as indicated
- Obtain IV access and perform laboratory assessments
- Check glucose; treat if indicated
- Obtain 12-lead ECG
- Perform neurologic screening assessment
- Order emergent CT brain without contrast or MRI scan

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?

- 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?

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

- Not a candidate
  - Consider EVT transfer within 60 minutes