Emergency Neurological Life Support

Acute Stroke Initial Assessment

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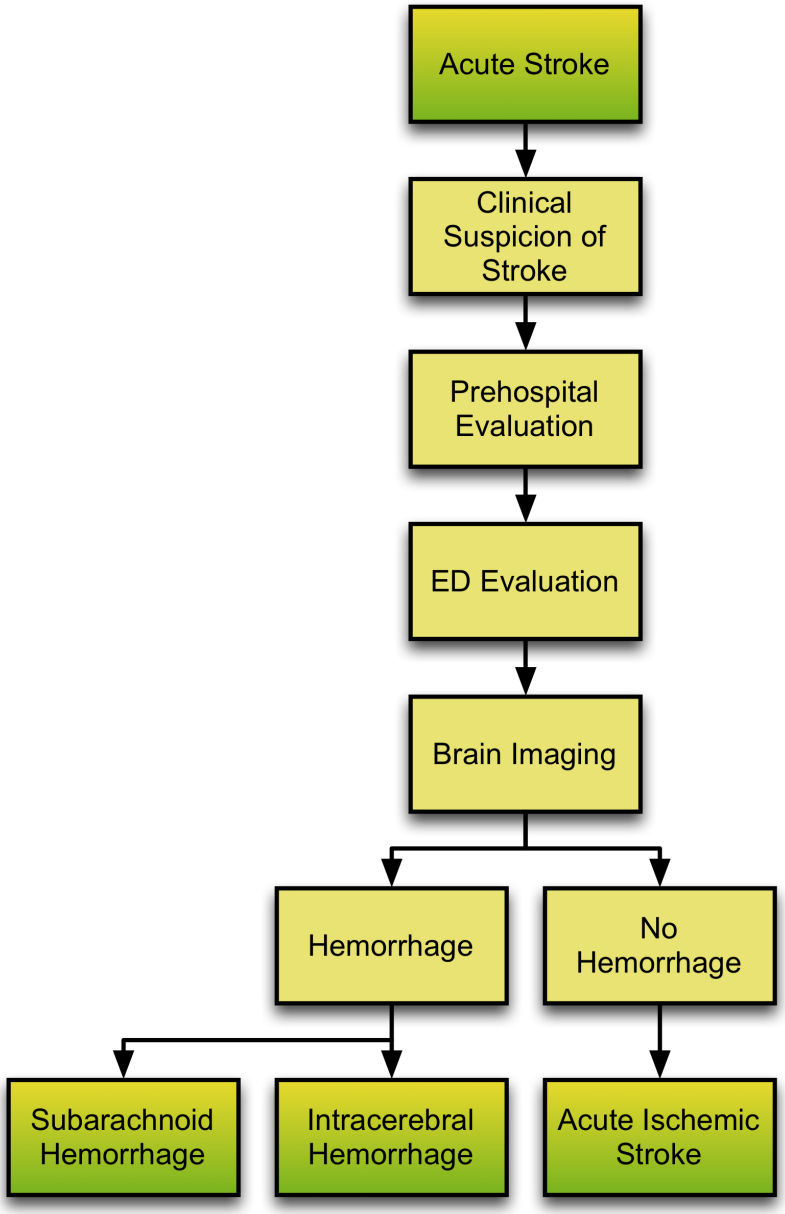

Checklist & Communication

Flowchart

Checklist:

- ☐ Establish time of onset (time last seen normal)
- ☐ Vital Signs
- ☐ Imaging
- ☐ NIHSS
- ☐ GCS
- ☐ Labs: CBC, Platelets, Chemistries, PT/PTT, glucose

Communication:

- ☐ Age
- ☐ Time of Onset
- ☐ NIHSS
- ☐ Imaging findings: primary hemorrhage, ischemia, or normal scan

Flowchart

Imaging does not show hemorrhage

CT or MRI imaging are either normal, or show an ischemic infarct

CT or MRI imaging is either normal, or shows an ischemic infarct.
See ENLS protocol Ischemic Stroke.

Flowchart

Imaging Shows Hemorrhage

CT or MR imaging show a hemorrhage

CT or MRI imaging reveal hemorrhage in the brain accounting for their neurological findings. Now determine whether the blood is in the subarachnoid space or within the brain itself (including ventricle).

Flowchart

Intracerebral Hemorrhage

Most of the blood is within the brain parenchyma

If there was clear evidence of head trauma, the blood may be simply due to the trauma alone. If so, refer to ENLS protocol Traumatic Brain Injury.

If there is no evidence of head trauma, refer to the ENLS protocol Intracerebral Hemorrhage.

Flowchart

Step 1

Clinical suspicion of stroke

Out of hospital:

- Acute onset focal neurologic symptoms
- 911 EMS services alerted

Flowchart

Step 2

Prehospital evaluation

Prehospital Evaluation:

- ABCs
- Stroke screening tool
- Time last known normal
- Medication list
- Consider triage to stroke center

Flowchart

Step 3

Primary Emergency Department Assessment

Emergency department evaluation:

- ABCs
- Focused neurologic exam (5 minutes): GCS, NIHSS
- History: medications, atrial fibrillation
- Labs: CBC, PT/PTT, glucose, chemistry panel

Flowchart

Step 4

Cerebrovascular Imaging

Imaging:

- CT or MRI - CT is usually faster
- Consider "Stroke CT" that includes non-contrast head CT, CTA (angiography) of the neck and brain, and CT perfusion of the brain
- Consider MRI that includes MRA of head and neck, DWI and MR perfusion of the brain

Note: imaging inclusions and exclusions regarding t-PA administration are typically based on a non-contrast CT of the head alone.

Flowchart

Subarachnoid Hemorrhage

CT or MRI shows blood in the subarachnoid space

The predominance of blood is in the subarachnoid space. If there was clear evidence of head trauma, the blood may be simply due to the trauma alone. If so, refer to the ENLS protocol Traumatic Brain Injury.

If the predominance of blood in in the subarachnoid space and there is no evidence of head trauma, the hemorrhage is likely due to a ruptured cerebral aneurysm. Refer to the ENLS protocol Subarachnoid Hemorrhage.