Assessing the Stroke Patient

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Cincinnati Pre-Hospital Stroke Scale

• May be done by EMS
  o One of many
  o F – facial droop on one side
  o A – arm drift (hold a pizza box, close your eyes)
  o S - speech – have patient say “the sky is blue in Cincinnati”
    or “you can’t teach an old dog new tricks”
  o T – time of onset
• Miami Emergency Neurological Deficit
• No number score
• Report will include each response
Standard Presentation
Left sided Stroke (MCA or parts)

- Aphasia – inability to speak or understand spoken word
  - May produce word salad
  - May affect swallow on either side
- Left lateral gaze
- Right visual field deficit
- Right hemiparesis
- Right hemisensory loss
Right sided Stroke (MCA or parts)

- Flat affect
- Right lateral gaze
- Left visual field deficit
- Left hemiparesis/hemisensory
- **Unaware of deficits!**
- Nonverbal memory impaired
  - Food smell on NPO patients
What if it isn’t FAST?

- Other arteries
- Ruptured aneurysms
- Intracerebral bleeds
  - Arterial
  - Lacunar
  - Venous sinus
- Central retinal artery occlusion
Sudden is Key

- Sudden numbness or weakness of an extremity
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, or loss of balance
- Sudden severe headache with no known cause
Vertebro-Basilar Stroke

- Diplopia – double vision
- Dysphagia – difficulty swallowing
- Dysarthria – speech difficulty R/T coordination of larynx, tongue, etc.
- Dizziness
- Deafness, tinnitus
- Double hemisensory or hemiparesis (both sides)
- Drop attacks
- Acute vestibular syndrome
- Incomplete basilar stroke may result in only intractable vomiting
- May have an NIHSS of 0
Cerebellar

- Fine Movement
- Coordination
- Balance
- Not strength

Use of feedback loops

Assess finger-nose, finger-finger…

PICA – Posteroinferior Cerebellar artery
SCA – Superior Cerebellar artery
Occipital Lobe

- Typically vision changes
  - Blindness
  - Denial of deficit
  - Visual field cuts
  - Homonymous hemianopia
  - Illusion/hallucination
  - Agnosias

- Amnesia

- PCA – Posterior Cerebral Artery
Parietal Lobe

• Sensation!
  o Ideomotor praxis on dominant side (do what I do/say)
  o Spatial orientation on nondominant
  o Touch, pressure, position for each side
Temporal Lobe

- Seizures
- Receptive aphasia may appear to be confusion
- Interpretive area memories
- Assessment involves stories, pictures...
- Involve family
- Dominant lobe verbal memory
- Nondominant lobe nonverbal
Frontal Strokes

• Right frontal strokes may present as
  o Mania
  o Delirium
  o Delusions

• Left frontal strokes may present as
  o Depression
  o Diminished affect
  o Alien hand syndrome
  o Monotonous speech

http://www.youtube.com/watch?v=OJTH_rLgnL0
The Stuff on the Inside
Basal Ganglia

- Includes Putamen, Globus Pallidus, Caudate Nucleus, Amygdaloid Body, and Clausrum
Thalamic Strokes

- Mania
- All senses except smell
- Pain awareness
- Attention
- RAS
- Limbic system
Midbrain (green)

- Visual field deficit
- Hearing impairment
- Uncoordinated body movement
- Involuntary eye movement
- Assess EOMs
- Coordination
Midbrain

• Posterior Cerebral Artery

• Top of the Basilar syndrome
  o Unconscious
  o Quadriplegic
  o Pupil abnormalities
  o EOM deficits
  o May be incontinent
Pontine

- Alteration of smell, taste, hearing, or vision (total or partial)
- Urinary incontinence
- Drooping of eyelid (ptosis) and weakness of ocular muscles
- Decreased reflexes: swallow, gag and pupil reactivity to light
- Decreased sensation and muscle weakness of the face
- Weakness in tongue
- Nystagmus (involuntary eye movement)
- Alteration of breathing pattern

- Penetrating arteries branching off the Basilar feed the Pons
- Origins of CNs V - VIII
Larger Pontine Bleeds

- Coma
- Quadriplegia
- Ophthalmoparesis (weak occulomotor muscles)
- Pinpoint pupils
- Poor prognosis
Medulla

- Stimulates the intercostal muscles and diaphragm
- Regulates heartbeat
- Regulates the diameter of arterioles thus adjusting blood flow
- Autonomic functions such as vomiting and digestion.

- Cranial Nerves IX – XII origins
- Fed by Vertebral arteries
Medulla

- Assess chest wall expansion, deep breathing
- Telemetry
- Blood pressure
- GI function
- Cough and gag
- Swallow
- Shrug
Step by Step

• Presenting symptoms
• Location of the stroke
  o Bleed or occlusion
• Expand your assessment to include possible S/S for that area
• Then expand to include possible S/S for adjacent areas
Questions?