Atypical Ischemic Stroke Presentations

The rapid recognition and correct diagnosis of stroke is paramount in guiding hyperacute management and treatment.

Atypical stroke presentations often result in delayed diagnosis and implementation of time-dependent therapies.

Neuropsychiatric Symptoms

Present in ~ 3% of strokes
- delirium
- delusional state
- acute onset dementia
- mania
- abnormal/strange behavior

Often affect the non-dominant (RIGHT) hemisphere
Frontal and parietal regions
Focal signs often absent or mild and transient

Often are misinterpreted....
- psychiatric, dementia, intoxications, metabolic

Acute Confusional State

Delirium - Confusion with Agitation or Drowsiness
- ELDERLY
- preexisting dementia
- hemispheric stroke syndrome
- more frequent in hemorrhagic stroke

Acute Confusional State

Delirium - Confusion with Agitation or Drowsiness
- right temporal gyrus
- right inferior parietal lobe
- occipital lobe
**Aphasia**

"Inability to understand or produce language"

**Types of Aphasia**

- Garbled speech = Aphasia
- Garbled speech ≠ Slurred speech
- Slurred speech = Dysarthria

**Altered Level of Consciousness**

**Artery of Percheron Stroke**

- Uncommon anatomic variant - paramedian a.
- Unilateral proximal posterior cerebral artery
- BILATERAL paramedian thalami (38%)
- +/- BILATERAL rostral midbrain (43%)

**Altered Level of Consciousness**

- confusion or memory impairment (58%)
- drowsiness
- hypersonolence
- coma (42%)
- vertical gaze palsy (65%)
- +/- brainstem signs/symptoms
  - eye movement abnormalities
  - weakness
  - incoordination/ataxia
  - movement disorders
Altered Level of Consciousness

Artery of Percheron Stroke

TREATMENT - thrombolysis
- often diagnosed outside of time window

PROGNOSIS - depends on midbrain involvement
~ 25% good outcome if midbrain affected
~ 67% good outcome if midbrain not affected

Top of the Basilar Artery Syndrome

TREATMENT - thrombolysis
- frequently diagnosed outside of time window for tPA
- mechanical thrombectomy

PROGNOSIS -
- Mortality rate > 85%
- Recanalization mortality rate ~ 40%

Altered Level of Consciousness

Top of the Basilar Artery Syndrome

- Thromboembolism
- Occlusion of the rostral basilar artery
- Midbrain, thalamus, temporal lobe, occipital lobe
- Pons

- Vertigo, nausea, and vomiting
- Decreased level of alertness
- Ataxia
- Eye movement abnormalities
- Oropharyngeal dysfunction
- Respiratory disturbance
- Weakness
- Sensory deficit
- Crossed findings
- Other brainstem signs/symptoms

Headache

Headache at ischemic stroke onset
- Reported frequency between 7% and 65%
- Closer to 25%? Or lower

Altered Level of Consciousness

Top of the Basilar Artery Syndrome

- Reported frequency between 7% and 65%
- Closer to 25%? Or lower
Headache at Stroke Onset in 2196 Patients With Ischemic Stroke or Transient Ischemic Attack

Susanne Teschke, MD; Roman Wimmer, MD; Stefan Gerresheim, MD; Wilfried Lang, MD; Wolfgang Lackner, MD

Background and Purpose—Headache is a common symptom in acute ischemic and hemorrhagic stroke, but many aspects of its association with other clinical factors are controversial.

Methods—We analyzed characteristics of headache symptoms at stroke onset and associations between headache at stroke onset and several clinical parameters in 2196 patients experiencing ischemic stroke or transient ischemic attack within a multicenter hospital-based stroke registry.

Results—Five hundred eighty-eight (27%) patients experienced headache at stroke onset. In a multivariate analysis, headache at stroke onset was positively associated with female sex, history of migraine, younger age, cerebral stroke (but not with other brain sites locations), and blood pressure values on admission <150 mm Hg systolic and <90 mm Hg diastolic. It showed no significant association with stroke severity measured by the modified Rankin Scale at days 3-6 after the event, presenting stroke, or time of day.

Conclusion—Our results, derived from a large number of systematically documented patients with acute ischemic stroke, indicate that headache at stroke onset is a common symptom of vascular stroke or seizure. Our results indicate that the previously described association of headache with venous thrombosis stroke is mainly because of its association with cerebrovascular stroke. We could confirm previously described associations of headache in stroke onset with younger age and a history of migraine, implicating a careful evaluation of young patients with a local neurovascular deficit and a history of migraine to avoid misclassification as “complicated migraine.” (Stroke. 2003;34[4].)

Headache

Cerebral venous sinus thrombosis

Cervical and cerebral artery dissection

Hemorrhagic stroke

Subarachnoid hemorrhage

Migraine headache

Thank You…..