

Table 1. Differential diagnosis of acute stroke syndromes, mimics, and chameleons

Stroke subtypes: cerebrovascular processes resulting in acute stroke syndromes

Ischemic stroke

 Embolic

 Thrombotic

Hemorrhagic stroke

Lacunar infarction

Intra-parenchymal hemorrhage

 Intra-cerebral hemorrhage

 Arterio-venous malformations

 Aneurysmal hemorrhage with intra-parenchymal extension

Venous thrombosis

Vascular problems resulting in embolic stroke

 aortic dissection

 internal carotid artery dissection

 paradoxical embolism secondary to ASD, VSD, patent foramen ovale

Stroke mimics: unusual manifestations of nonvascular conditions that may resemble acute stroke syndrome

Metabolic problems

 Hypoglycemia

 Hyperglycemia

 Hepatic encephalopathy

CNS problems

 Seizure/postictal

 Generalized convulsive with postictal confusion or focal neurologic signs

Nonconvulsive status epilepticus

Hemiplegic migraine

Subdural hematoma

Abscess

Intracranial tumors

 Primary CNS

 Metastatic

Hypertensive encephalopathy

Multiple sclerosis

Psychiatric problems

 Factitious disorders

Stroke chameleons: unusual clinical manifestations of strokes and strokes disguised as other clinical processes

Acute confusional states: frontal cortex stroke

Seizures with acute stroke

Sensory symptoms: fronto-parietal, thalamic stroke or internal capsule lacunar infarcts

Movement disorders: Acute hemiballismus, or unilateral dyskinesia - subthalamic nucleus

Box 1. Stroke mimics from initial diagnostic impressions in the emergency department (from Libman ^[5])

Seizure and postictal state

Systemic infection

Brain tumor

Toxic-metabolic

Positional vertigo

Cardiac

Syncope

Trauma

Subdural hematoma

Herpes encephalitis

Transient global amnesia

Dementia

Multiple sclerosis demyelinating disease

Cervical spine fracture

Myasthenia gravis

Parkinsonism

Hypertensive encephalopathy

Conversion disorder

Table 4. Common patterns of findings according to stroke location

1. Left anterior circulation (left ICA-MCA)—nonlacunar; right hemiparesis, hemisensory loss, hemianopia, aphasia
2. Right anterior circulation (right ICA-MCA)—nonlacunar; left hemiparesis, hemisensory loss, hemianopia; left neglect, decreased awareness of the deficit, abnormal drawing and copying, abnormal visual-spatial abilities
3. Vertebrobasilar system (brainstem and cerebellum)—vertigo, diplopia, crossed motor and/or sensory signs (one side of the face and the contralateral body), ataxia; bilateral motor and/or sensory signs
4. Left PCA—right hemianopia, alexia without agraphia; right hemisensory symptoms
5. Right PCA—left hemianopia, left hemisensory symptoms, topographical disorientation
6. Lacunar infarction—weakness of face, arm, and leg on one side of the body without other signs; sensory symptoms in face, arm, and leg on one side of the body without other symptoms and signs; weakness with ataxia on one side of the body; dysarthria and clumsiness of one hand