



Cerebrovascular Syndromes

Last Updated: July 5, 2021

Table 1: Cerebral Ischemia Syndromes

Resulting symptoms and signs from occlusion of the artery listed in left column

Anterior Cerebral Artery	<ul style="list-style-type: none">• Contralateral sensory neuropathy (preferential lower limb)• Contralateral motor neuropathy (preferential lower limb)• Bilateral gaze deviation to side of infarction• Apraxia (left sided ideomotor)• Akinetic mutism• Primitive reflexes (grasp, suck)• Behavioral abnormalities (apathy)• Reduced spontaneous speech• Urinary incontinence
Middle Cerebral Artery	<ul style="list-style-type: none">• Contralateral sensory neuropathy (preferential face and upper limb)• Contralateral motor neuropathy (preferential face and upper limb)• Left hemispheric infarction:<ul style="list-style-type: none">• Aphasia (motor, sensory, global)• Gerstmann syndrome• Right hemispheric infarction:<ul style="list-style-type: none">• Left-sided hemineglect• Amusia• Prosopagnosia• Constructional apraxia• Apractognosia• Dressing apraxia• Atopognosia

	<ul style="list-style-type: none"> • Asomatognosia • Anosognosia
Anterior Choroidal Artery	<ul style="list-style-type: none"> • Contralateral sensory neuropathy • Contralateral motor neuropathy • Homonymous hemianopia
Posterior Cerebral Artery	<ul style="list-style-type: none"> • Contralateral homonymous hemianopia/quadrantanopia • Alexia without agraphia • Memory impairment • Choreoathetosis • Contralateral hemiballismus • Oculomotor palsy • INO • Vertical gaze palsy • Cortical blindness • Coma

Table 2: Midbrain Vascular Syndromes

List of midbrain vascular syndromes and corresponding dysfunctional structures

Weber's Syndrome	<ul style="list-style-type: none"> • Contralateral hemiplegia • Ipsilateral CN III palsy
Claude's Syndrome	<ul style="list-style-type: none"> • Contralateral hemiataxia, nucleus ruber tremor (Holmes' tremor) • Cerebellar signs • Ipsilateral CN III palsy
Benedict's Syndrome	<ul style="list-style-type: none"> • Contralateral hemichorea/athetosis or intention tremor • Ipsilateral CN III palsy
Parinaud's Syndrome	<ul style="list-style-type: none"> • Vertical gaze palsy • Lid lag and Collier's sign • Pupillary light dissociation

Table 3: Pontine Vascular Syndromes

List of pontine vascular syndromes and corresponding dysfunctional structures

Ataxic Hemiparesis	<ul style="list-style-type: none">● Ipsilateral hemiataxia● Hemiparesis (LE > UE)● Nystagmus● Paresthesia● Dysarthria
Locked-in Syndrome	<ul style="list-style-type: none">● Quadriplegia● Horizontal gaze palsy● Aphonia
Foville's Syndrome	<ul style="list-style-type: none">● Ipsilateral CN VII palsy● Horizontal gaze palsy (ipsilateral to lesion)● Contralateral hemiplegia
Dysarthria-Clumsy Hand Syndrome	<ul style="list-style-type: none">● Ipsilateral CN VII palsy● Dysarthria● Ipsilateral UE hyperreflexia● Ipsilateral Babinski sign● Ipsilateral UE paresis / dyscoordination
Millard-Gubler Syndrome	<ul style="list-style-type: none">● Ipsilateral CN VII palsy● Ipsilateral CN VI palsy● Contralateral hemiplegia
Marie-Foix Syndrome	<ul style="list-style-type: none">● Contralateral hemiparesis● Contralateral hemihypesthesia● Ipsilateral cerebellar ataxia
Raymond-Cestan Syndrome	<ul style="list-style-type: none">● Contralateral sensory loss● Cerebellar ataxia● Contralateral hemiparesis● Conjugate gaze dysfunction

Table 4: Medullary Vascular Syndromes

List of medullary vascular syndromes and corresponding dysfunctional structures

Wallenberg's Syndrome	<ul style="list-style-type: none"> ● Ipsilateral pharyngeal, palatal, and vocal cord paralysis ● Ipsilateral Horner's syndrome ● Ipsilateral facial and contralateral body hypalgesia / thermoanesthesia ● Ipsilateral cerebellar signs ● Diplopia
Lateral Ponto-medullary Syndrome	<ul style="list-style-type: none"> ● Ipsilateral facial paresis ● Ipsilateral tinnitus (rare abnormalities in hearing) ● Ipsilateral pharyngeal, palatal, and vocal cord paralysis ● Ipsilateral Horner's syndrome ● Ipsilateral facial and contralateral body hypalgesia/thermoanesthesia ● Ipsilateral cerebellar signs ● Diplopia
Dejerine Anterior Bulbar Syndrome	<ul style="list-style-type: none"> ● Contralateral proprioception and vibratory sensation loss ● Ipsilateral hemiparesis and atrophy of bulbar muscles ● Contralateral hemiplegia (not effecting face)

Table 5: Elevated Intracranial Pressure

Differential list for elevated intracranial pressure

Neoplastic	<ul style="list-style-type: none"> ● Primary (glioma, meningioma, oligodendroglioma, medulloblastoma, schwannoma) ● Meningeal carcinomatosis ● Metastasis

Vascular	<ul style="list-style-type: none"> • Infarction (large) • Hematoma (parenchymal, SAH, epidural, subdural) • Aneurysm • Anemia (pernicious, iron deficiency) • Congestive heart failure • Venous sinus thrombosis • Hypertensive encephalopathy
Endocrine	<ul style="list-style-type: none"> • Pregnancy state • Hypoparathyroidism • Addison's disease
Infectious	<ul style="list-style-type: none"> • Meningitis (bacterial, viral, fungal, parasitic) • Encephalitis (viral) • Abscess (bacterial, fungal) • Meningismus
Inflammatory	<ul style="list-style-type: none"> • Multiple sclerosis • Sarcoidosis • Histiocytosis • Mastoiditis • Vasculitis • Reye's syndrome • Cerebral edema
Toxic	<ul style="list-style-type: none"> • Lead • Arsenic • Sulfonamide • Tetracycline • Penicillin
Metabolic	<ul style="list-style-type: none"> • Hyper-/hypo-aminosis A • Diabetic ketoacidosis
Congenital	<ul style="list-style-type: none"> • Hydrocephalus (also acquired)
Miscellaneous	<ul style="list-style-type: none"> • Trauma • Pseudotumor cerebri

- Paget's disease
- COPD
- Post-status epilepticus
- Wiscott-Aldrich syndrome
- Obesity

DOI: <https://doi.org/10.18791/nsatlas.v2.02.1.5>