

Ischemic Stroke Cases:

Case 1

A 60-year-old right handed man was brought to the ED by his family because of the sudden onset of difficulty in walking. He had been in his usual state of health until that morning, when he fell while trying to get out of bed. He was able to get back up but later dragged his right leg while walking. He found that his right upper extremity was weak when he tried to grasp objects for support. His family noted that he was drooling from the left side of his mouth. The patient understood what people said to him, but the family thought his speech was slurred. He denied double vision, loss of vision, or any change in sensation.

On neurological examination the patient was alert, oriented, and cooperative. His speech was slurred but fluent, without word-finding difficulty. Speech and reading comprehension were normal. The pupils were 3 mm in diameter and reactive to light. On command, the patient could look conjugately to the right, up and down, but not to the left. Visual fields were intact to confrontation. When he spoke, the left side of his face did not move. When he was asked to smile, the right side moved spontaneously while the left side remained immobile. He was able to close his eye tightly on the right, but not the left. He was able to wrinkle his forehead on the right but not the left. Otherwise CNs normal. No ataxia seen on the left side of his body, but he could not move the right for testing.

Key points: Left upper and lower facial weakness and inability to look left with his eyes with right arm and leg weakness (Alternating Hemiparesis.) Alternating hemiparesis implies a paramedian brainstem lesion.

A left paramedian pontine stroke can cause damage to the cortical spinal tract as well as the CN 6 nucleus and the Facial Nerve

Case 2

A 70-year-old left hand weakness has sudden onset of right arm and leg numbness and left arm and leg clumsiness falling to the left. She is also noted to have hoarseness when she is talking.

On examination she is awake alert and oriented x 3. She is dysarthric with her speech. CNs are intact, except: left pupil is 6 mm and right pupil is 3 mm both are reactive; decreased sensation on her left face; her palate does not elevate as well on the left. Sensation was reduced on the right side of her body. Proprioception is intact. Strength intact. Falls to the left when asked to stand. Finger to nose on the left reduced.

Key points: Left facial sensation loss and right body sensation loss (Alternating Hemianesthesia). Alternating hemianesthesia is associated with a lateral brainstem lesion. The hoarseness makes this likely at the level of the medulla. This is consistent with a lateral medullary syndrome or Wallenberg Syndrome.

Case 3

An 83-year-old woman with history of atrial fibrillation is found to mute after falling out of bed.

On examination she does not respond to noxious stimuli to the right side of her body. She is spontaneously moving the left side of the body. Does not follow any commands. Eyes are deviated to the left and does not move with head turning. No blink to threat with confrontation on the right.

Key points: Hemiplegia with hemianopsia is consistent with a MCA occlusion which would be a large vessel occlusion. It is important to evaluate LVOs for possible endovascular therapy since hemispheric stroke have a very high morbidity and mortality and endovascular therapy can greatly reduce the risk.

Case 4

A 90-year-old man is brought to the emergency department with severe nausea, vomiting and vertigo. He suddenly loses consciousness and needs to be intubated because of respiratory arrest.

He does not move his arms or legs to stimuli. His pupils are reactive to light. Otherwise no response on examination. No cough. No gag, etc.

Key point: sudden onset of coma and respiratory arrest often with a prodrome of vertigo and N/V can be seen with basilar artery stroke. Basilar artery strokes are associated with a very high mortality since it can cause extensive damage to the brainstem. Recognition of the entity and angiography is required to potentially prevent death or severe disability.