



A 60-year-old male with neuropsychiatric presentation of stroke

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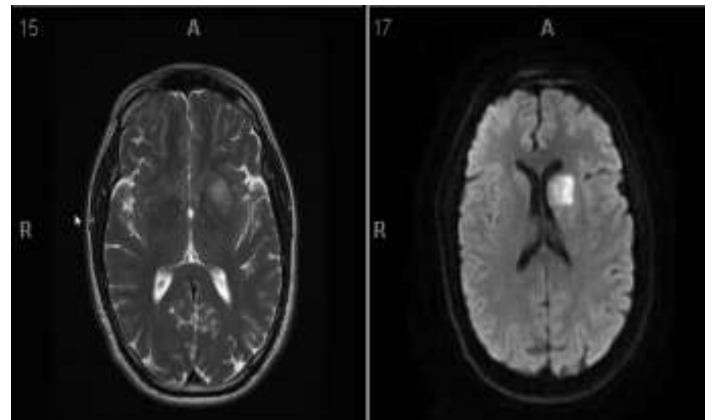
HPI

- This is a 60-year-old male with no significant past medical history who was admitted for evaluation of change of mental status. The neurologist asked him, "why are you in the hospital" and he said, "I do not know." He said, "my wife knows why I am here. There were no other neurological complaints.
- Wife said they are moving to a different house and are busy packing everything at home. Two days before ER visit, Last Thursday, there was a problem selling his old house, and he was under stress. Friday night, he complained of tiredness, weakness, and not feeling good. On Saturday morning, he was confused, acting a little unusual for normal behavior. He was not paying attention, giggling for nothing. He became passive in his attitude and behavior. He was showing some personality changes. So, his wife brought him to ER. ER did a CT of the head and found some abnormalities not sure what this is.
- Neurology consultation was called in. This morning he is fine, as per the statement from his wife. He has a history of drinking ETOH for over 40 years every day but small in amount.

Initial exam and work up

- Neurological examination: Normal.
- Initial Labs including Drug screen: Normal.
- CT scan of head: Hypodensity within the left caudate and Lentiform Nuclei concerning for AIS (arterial ischemic stroke). Edema related to an underlying mass is considered less likely.

MRI of the brain



- Small to moderate-sized acute infarct identified in the left caudate.
- Putamen and adjacent frontal lobe white matter. Small amount of internal gradient blooming in the left caudate could represent petechial hemorrhage.
- No abnormal intracranial enhancement. No other significant intracranial findings.

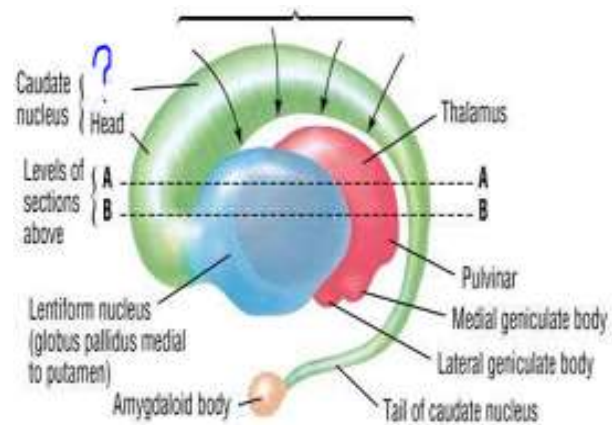
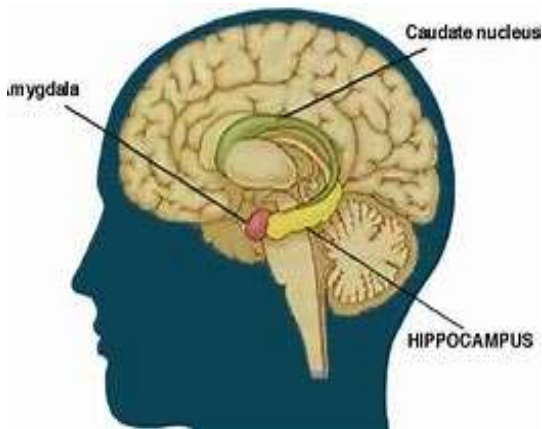
Final diagnosis and Treatment

1. Acute/ subacute Left caudate ischemic stroke
2. Neuropsychiatric behavior was due to left Caudate stroke.
3. Patient was discharged with ASA, Plavix, Statin and PT, OT and ST as outpatient.

Analysis of the case

Sudden onset of neuro-psychological change and cognitive behavioral change with no focal neurological deficit.

Anatomy of Caudate



• The caudate nucleus is one of the structures that make up the corpus striatum, which is a component of the basal ganglia. While the caudate nucleus has long been associated with motor processes due to its role in Parkinson's disease, it plays important roles in various other nonmotor functions as well, including procedural learning, associative learning, and inhibitory control of action, among other functions. The caudate is also one of the brain structures which compose the reward system and functions as part of the cortico–basal ganglia–thalamic loop

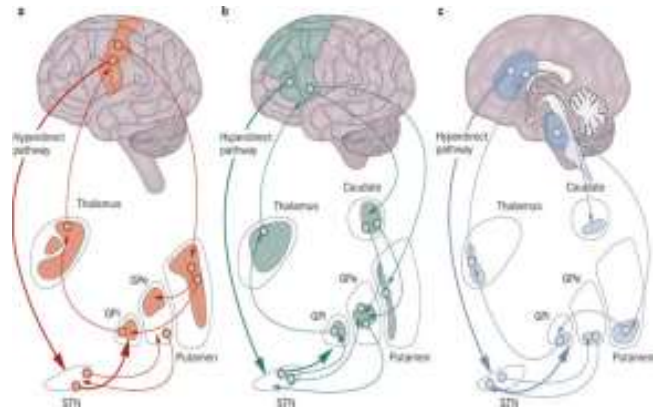
Effect of caudate stroke

1. Agitation
2. Abulia
3. Neglect (right sided lesion 25%)
4. Mood changes (1/3)
5. Memory disturbances (1/3, bilateral dementia)
6. Dysarthria
7. Aphasia
8. Movement disorder (ballistic, choreiform)
9. Motor weakness

Diseases related to Caudate lesions

1. AD disease, study in 2013
2. Parkinson's Disease
3. Huntington Disease
4. ADHD, 2002
5. Schizophrenia, 2004
6. Bipolar type 1, 2014
7. OCD
8. Autism, Tourette's syndrome

CBGTC Loop



The cortico-basal ganglia-thalamo-cortical loop (CBGTC loop) is a system of neural circuits in the brain. The loop involves connections between the cortex, the basal ganglia, the thalamus, and back to the cortex. It is of particular relevance to hyperkinetic and hypokinetic movement disorders, such as Parkinson's disease and Huntington's disease, as well as to mental disorders of control, such as attention deficit hyperactivity disorder (ADHD), obsessive–compulsive disorder (OCD), and Tourette syndrome.

Bibliography

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