

# Case Presentation: 74 Year Old Woman with Right Sided Motor Weakness and Intermittent Facial Droop

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# History of Present Illness

74 year old woman presents to the ED with a 2 week history of right sided weakness and loss of sensation, starting with foot drag and moving up to her arms. The patient also had 3 episodes of facial droop, described as "pulling everything to the left" that occurred the previous three days in a row for 30-45 minutes at a time, at the same time each day. At this time, the patient mental status began to rapidly deteriorate.

In the ED she was confused and nonverbal. Patient did not speak English and daughter acted as interpreter.

Daughter reported that the patient was losing her balance and had progressively decreasing coordination. She endorsed intermittent visual hallucinations ("animals in the room"). Denied any vision loss, hearing loss, swallowing dysfunction, chest pain, or numbness/tingling.

# Additional History

PMH of CVA (posterior MCA stroke) 23 years ago, atrial fibrillation – currently being treated with Eliquis, T2DM, HLD, and HTN.

The patient was an immigrant and family history was unknown. She was never a smoker and did not drink alcohol. Patient had no history of illicit drug use.

Patient was normally independent at baseline.

# Examination and Initial Work-Up

BP - 172/78 HR - 70 T - 97 F RR - 20 SpO2 - 100%

Patient was well appearing but pleasantly confused. She was not oriented to place, time, or event. Minimally verbal and only occasionally repeated words spoken by daughter. CN II, III, IV, VI, VII intact. Remainder of CN could not be assessed. Motor 5/5 bilaterally. Reflexes 2+ with flexor plantar response. No cerebellar signs noted. Sensation and gait could not be assessed. Initial labs normal.

Patient was admitted to the stroke service for further work up of her symptoms. Initially patient was experiencing symptoms similar to her previous stroke so CT head without IV contrast was done.

# Non-contrast CT



# Non-contrast CT

No acute findings/acute intracranial hemorrhage

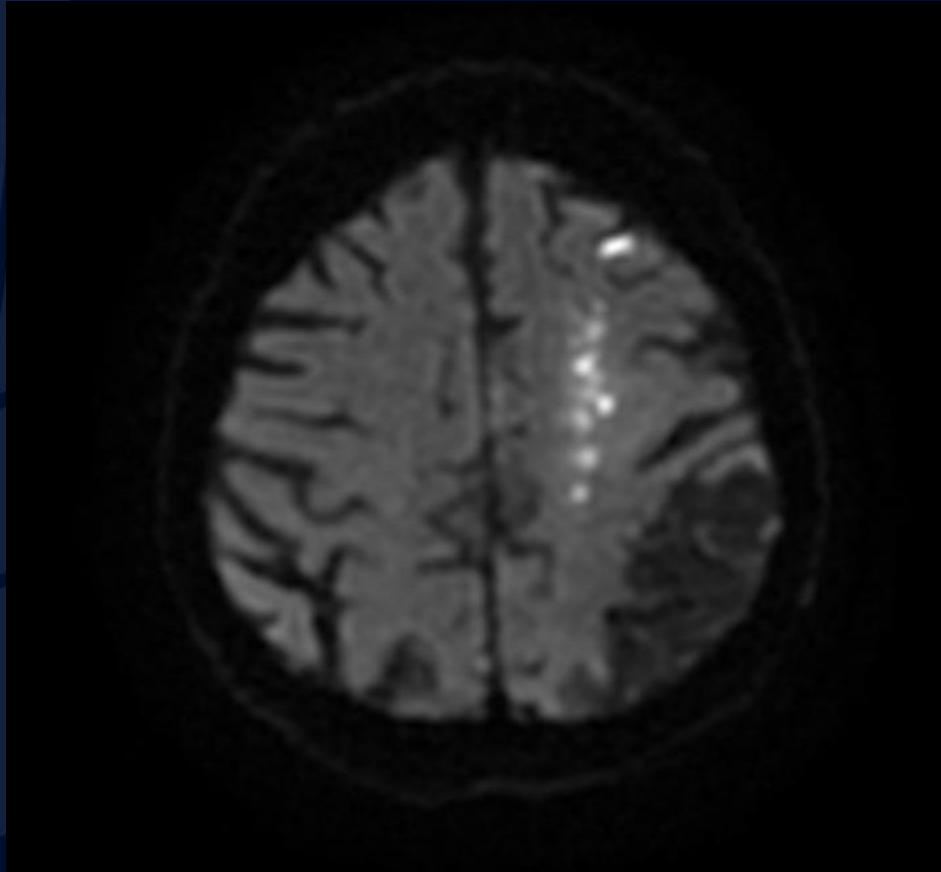


Chronic encephalomalacia and gliosis centered at the left temporoparietal/occipital lobes, likely related to remote infarct.

# Initial Differential Diagnosis and Hospital Course

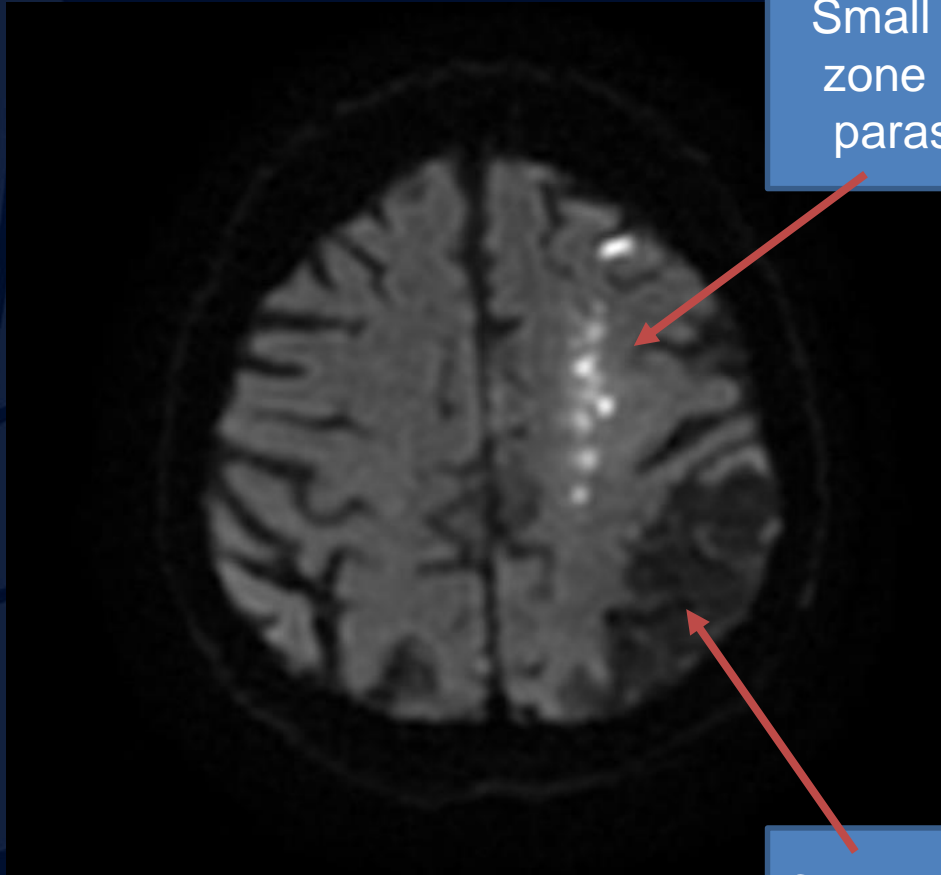
- Patient was having symptoms similar to her stroke 23 years ago. Unlikely to have had another stroke in the same distribution. No acute hemorrhage seen on CT
- Patient did not have any signs of infection or any other stressors that could cause recrudescence
- No signs of encephalopathy or metabolic derangements.
- Initial diagnosis of post stroke epilepsy
- Patient was started on long term monitoring (LTM) via EEG for 24 hours
- LTM showed occasional left hemisphere sharp waves and occasional left hemisphere LRDA, indicative of a propensity for focal seizures from the left hemisphere
- Patient was loaded with Keppra and continued with a maintenance dose of 500 mg twice daily
- Following discontinuation of LTM, patient was sent for MRI Brain with and without IV contrast

# DWI MRI





# DWI MRI



Small foci of acute border zone infarction in the left parasagittal frontal lobe

Background changes of chronic microangiopathy

Chronic encephalomalacic and gliotic changes are seen in the left parietal and temporal lobe compatible with an area of chronic MCA infarction

# Final Diagnosis

- MRI brain showed acute watershed infarct in the ACA-MCA border zone.
- LTM findings indicated focal seizures.
- Initially thought to be a post stroke epilepsy from the prior stroke 23 years ago, however after the results of the MRI most likely acute symptomatic seizures in the setting of a new stroke

# Acute symptomatic seizures following stroke

- Seizures occurring <7 days after stroke are termed “acute symptomatic”, occurring in up to 6% of stroke patients
- Most occur within 2 days post stroke and almost half (43%) within 24 hours post stroke
- Acute symptomatic seizures make up 25 to 30 percent of first seizures
- Diagnosis may be difficult due to needing to determine temporal relationship
- Patient should be treated with antiepileptics and underlying stroke etiology should be controlled.

# Sources

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3. Krumholz A, Wiebe S, Gronseth GS, Gloss DS, Sanchez AM, Kabir AA, Liferidge AT, Martello JP, Kanner AM, Shinnar S, Hopp JL. Evidence-based guideline: management of an unprovoked first seizure in adults: report of the guideline development subcommittee of the American academy of neurology and the american epilepsy society: evidence-based guideline. *Epilepsy Curr.* 2015;15(3):144–52.
4. Scoppettuolo P, Gaspard N, Depondt C, Legros B, Ligot N, Naeije G. Epileptic activity in neurological deterioration after ischemic stroke, a continuous EEG study. *Clin Neurophysiol.* 2019;130:2282–2286.