

A rare case of global aphasia without hemiparesis: an atypical stroke presentation

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Background: Aphasia without accompanying motor deficit is an uncommon neurological presentation that may lead to diagnostic delay in emergency settings. Global aphasia without hemiparesis presents a particular challenge, as it may mimic seizure, metabolic encephalopathy, or postictal states, especially when early neuroimaging is unrevealing.

Case Presentation: An 84-year-old man with a background of asthma was brought to the emergency department following a witnessed episode of vacant staring with possible brief limb movements lasting approximately 1 minute. There was no loss of continence, tongue biting, prodromal symptoms, or aura. He had been well earlier that day, with no history of alcohol misuse, recent trauma, infection, or anticoagulant use. Following the episode, the patient demonstrated a complete absence of meaningful speech despite preserved limb strength. This deficit was observed by paramedics and persisted on arrival to hospital 1 hour after symptom onset. He was hemodynamically stable with a regular cardiac rhythm. Neurological examination showed reduced environmental awareness with spontaneous eye opening. He produced incomprehensible vocalizations but localized pain in all four limbs. There was no facial asymmetry, and plantar responses were flexor bilaterally.

Investigations: Electrocardiography demonstrated a sinus rhythm with left axis deviation. Blood tests revealed mild hyponatremia at 127 mEq/l and blood glucose of 10 mmol/l, with normal pH and lactate. Non-contrast CT brain imaging showed no acute intracranial abnormality.

Management and Outcome: The patient was admitted under stroke services and treated with loading-dose aspirin. MRI brain imaging subsequently demonstrated an acute left thalamic infarct. Carotid Doppler studies revealed less than 30% stenosis bilaterally. During inpatient monitoring, language function improved progressively, with full recovery of speech output and comprehension. He was discharged on clopidogrel for secondary stroke prevention.

Conclusion: This case illustrates an atypical presentation of acute ischemic stroke manifesting as isolated global aphasia without motor deficit due to a strategic thalamic lesion. It highlights the limitations of early CT imaging and reinforces the importance of MRI diffusion-weighted imaging in patients presenting with isolated language impairment. Early recognition of this stroke phenotype is essential to avoid misdiagnosis and ensure timely secondary prevention.

Global aphasia typically presents with contralateral hemiparesis due to extensive cortical involvement. Global aphasia without hemiparesis is an uncommon stroke syndrome and is often misdiagnosed as a seizure or metabolic encephalopathy. Strategic subcortical lesions, including thalamic infarcts, can disrupt language networks via diaschisis while sparing motor pathways. MRI diffusion-weighted imaging is the most sensitive modality for detecting these lesions. This report describes an emergency presentation of isolated global aphasia caused by an acute left thalamic infarct initially mimicking a seizure. Persistent aphasia despite preserved motor function and normal CT imaging is highlighted as a key diagnostic clue, underscoring the importance of early MRI and increased recognition of thalamic stroke as a cause of isolated language disturbance.

Keywords: Stroke, emergency department, GAWH, aphasia.