Teaching NeuroImage: Atypical Anterior Cerebral Artery Syndrome From Pericallosal Artery Infarct

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A 76-year-old right-handed female presented with sudden right-sided weakness and mutism. Examination revealed transcortical motor aphasia, right arm apraxia and spasticity, and right leg hemiplegia. She demonstrated abulia, anosognosia, and emotional lability. CT angiogram demonstrated a left pericallosal artery occlusion (Figure 1). The patient received tPA. MRI demonstrated an infarct spanning the left supplementary motor area (SMA) and anterior cingulate cortex (Figure 2).¹

Acute onset of aphasia, contralateral dyspraxia and motor hemineglect should raise suspicion for SMA territory infarct while anterior cingulate involvement may result in acute spasticity and neuropsychiatric symptoms; these are rarely reported simultaneously in ACA infarcts.¹ Atypical ACA stroke syndromes are rare; clinical recognition avoids misdiagnosis.¹,²
Figure Legends

**Figure 1:** CT angiogram demonstrates acute occlusion (red arrow) of A3 segment of left ACA artery in the pericallosal branch.

![CT angiogram](image1.png)

**Figure 2:** Follow-up MRI showing axial FLAIR (A), DWI (B), sagittal FLAIR (C) and axial DTI (D) sequences. MRI confirms area of infarct involving the SMA (red asterisk), cingulate cortex (white asterisk) and sparing of the primary motor cortex (black asterisk) with corresponding DWI restriction. Axial DTI sequences confirm sparing of corticospinal tracts (thick arrow) and commissural fibres (thin arrow).

![Follow-up MRI](image2.png)
Appendix 1. Authors

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References


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