



# Case #94

NAME Educational Activities Committee

Case provided by:

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A 30-year-old man died a few days after having a witnessed seizure (reported to last 3 minutes) and regaining consciousness. At autopsy, the right cerebral hemisphere was noted to have the lesions seen in the image above.

This finding is most consistent with:

- A. Middle cerebral territory infarct
- B. Remote trauma
- C. Bacterial meningitis
- D. Brain abscess

Answer...

## B. Remote trauma

The decedent reportedly struck his head during a fall from a building terrace 9 years prior to this incident. The yellow-brown cavitory lesions in the right frontal and temporal regions are consistent with remote trauma. A similar smaller focus was identified in the left temporal region, suggesting a coup and contrecoup injury. The history of post-traumatic epilepsy in the patient further supports the possibility of remote trauma, as head injuries are a common cause of epilepsy.

Other responses...

## A. Middle cerebral territory infarct

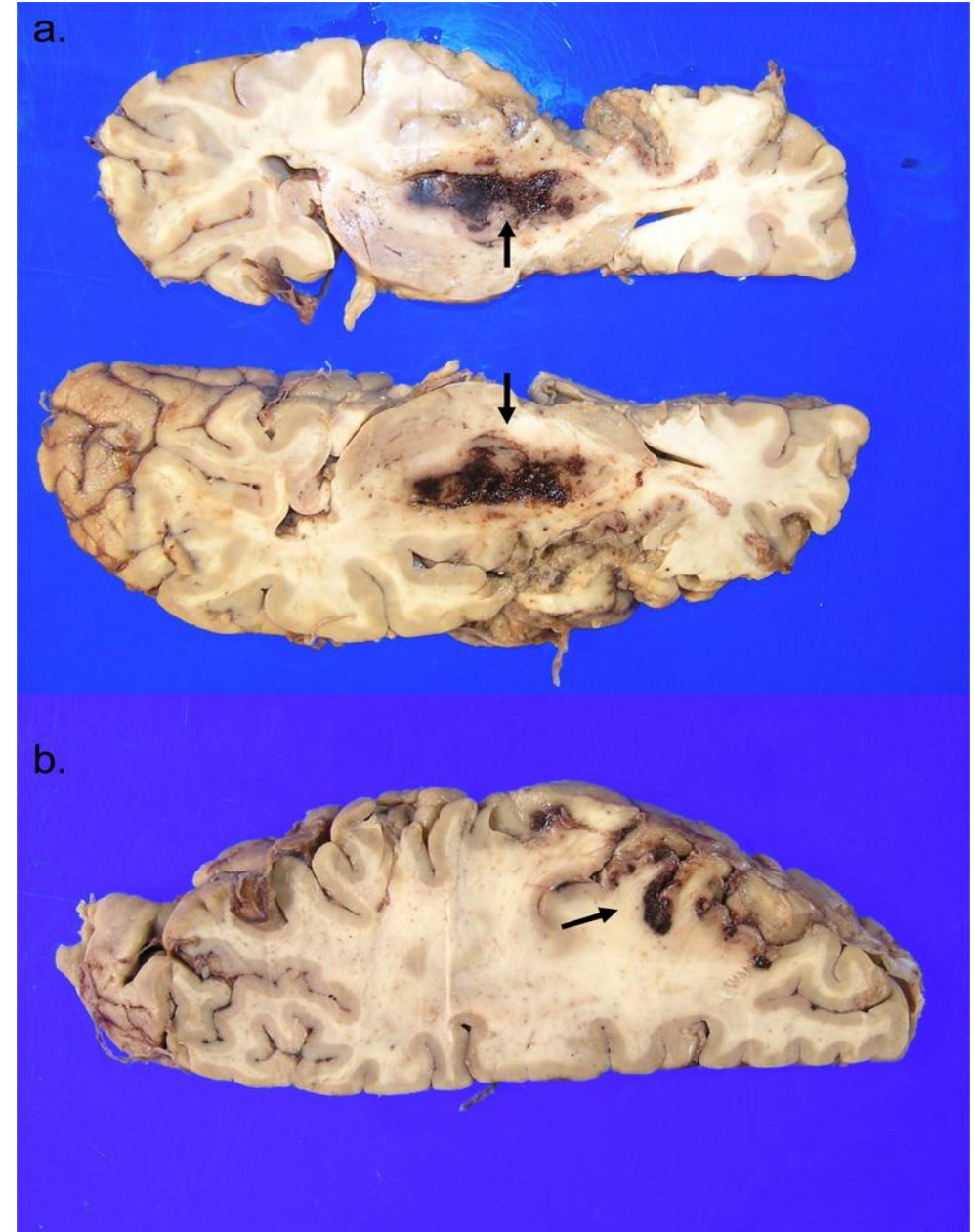
Thrombosis of the middle cerebral artery (MCA) can result in ischemic injury to the territory it perfuses. This typically presents with symptoms such as sudden onset focal neurological deficits, including weakness or numbness of the face, arm, or leg, typically on one side of the body, along with speech difficulties and visual disturbances. In the case presented, some of the same areas of cortical injury can be involved in an MCA territory infarct, but the relative preservation of the cortex along the lateral sulcus (Sylvian fissure) is inconsistent with an MCA infarct.



Panel A. Axial section of fixed left cerebral hemisphere shows large acute hematoma in the left basal ganglia (arrows), the site of severe hypertensive microvascular disease.

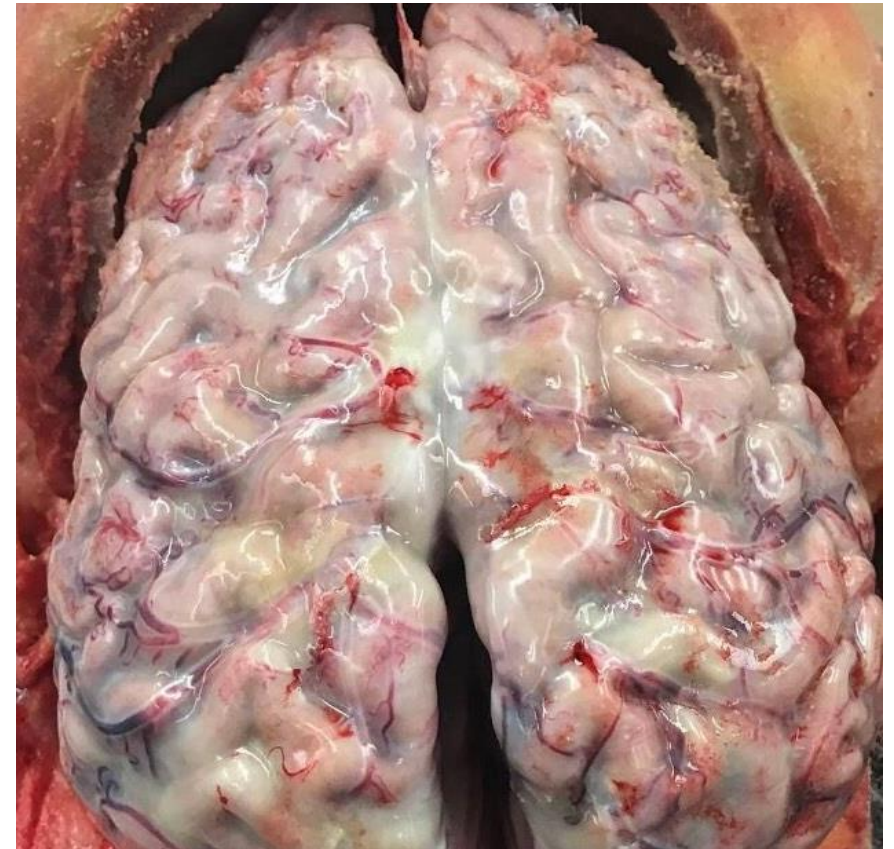
Panel B (left cerebral hemisphere) shows extensive left MCA territory subacute infarct. Arrow indicates a prominently hemorrhagic segment of the infarct. Note relative preservation of the left ACA territory (bottom right of the photograph)

Yin NS, Benavides S, Starkman S, Liebeskind DS, Saver JA, Salamon N, Jahan R, Duckwiler GR, Tateshima S, Vinuela F, Vespa PM, Chute DJ, Vinters HV. Autopsy findings after intracranial thrombectomy for acute ischemic stroke: a clinicopathologic study of 5 patients. *Stroke*. 2010 May;41(5):938-47. doi: 10.1161/STROKEAHA.109.576793. Epub 2010 Apr 1. PMID: 20360544; PMCID: PMC4120894. (page 20). <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4120894/>



## C. Bacterial Meningitis

Meningitis is an inflammation of the protective membranes covering the brain and spinal cord, typically caused by infection. It presents with symptoms such as fever, headache, stiff neck, and altered mental status. The patient's history of post-traumatic epilepsy and the acute presentation with a generalized convulsive seizure are more suggestive of a neurological condition rather than an infectious process like meningitis.



Pic: Morgan Blakely. #Pathology #neuropath.  
<https://twitter.com/JMGardnerMD/status/1175772243374346245/photo/1>.

## D. Brain abscess

A brain abscess is a localized area of acute inflammation and necrosis within the brain tissue, usually caused by bacterial or fungal infection. It typically presents with symptoms such as headache, fever, focal neurological deficits, and altered mental status. Brain abscesses may appear as ring-enhancing lesions on imaging studies such as MRI or CT scans.



Disseminated histoplasmosis with multiple brain abscesses. Dr. Belinda Galeano and Dr. Peter Lin, Mayo Clinic (Rochester).

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