



Sylvian fissure subpial hematoma: a rare imaging presentation of a ruptured middle cerebral artery aneurysm

Hematoma subpial na fissura silviana: uma rara apresentação de imagem de um aneurisma roto da artéria cerebral media

Jacob A. Schroeder¹  Thomas P. Reith¹  Matthew D. Benson¹  Joan E. Maley¹ 
Leonardo Furtado Freitas¹ 

¹ University of Iowa Hospitals and Clinics, Department of Radiology, Division of Neuroradiology, Iowa City IA, United States.

Address for correspondence Leonardo Furtado Freitas (email: drleonardofurtado@gmail.com).

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A 68-year-old female patient with a previously unruptured aneurysm in the left middle cerebral artery (→**Figure 1**) presented with aphasia and severe headache. A computed

tomography angiography (CTA) showed growth and new lobulation (→**Figure 1**) associated with hemorrhages, including a large sylvian hematoma, probably in the subpial

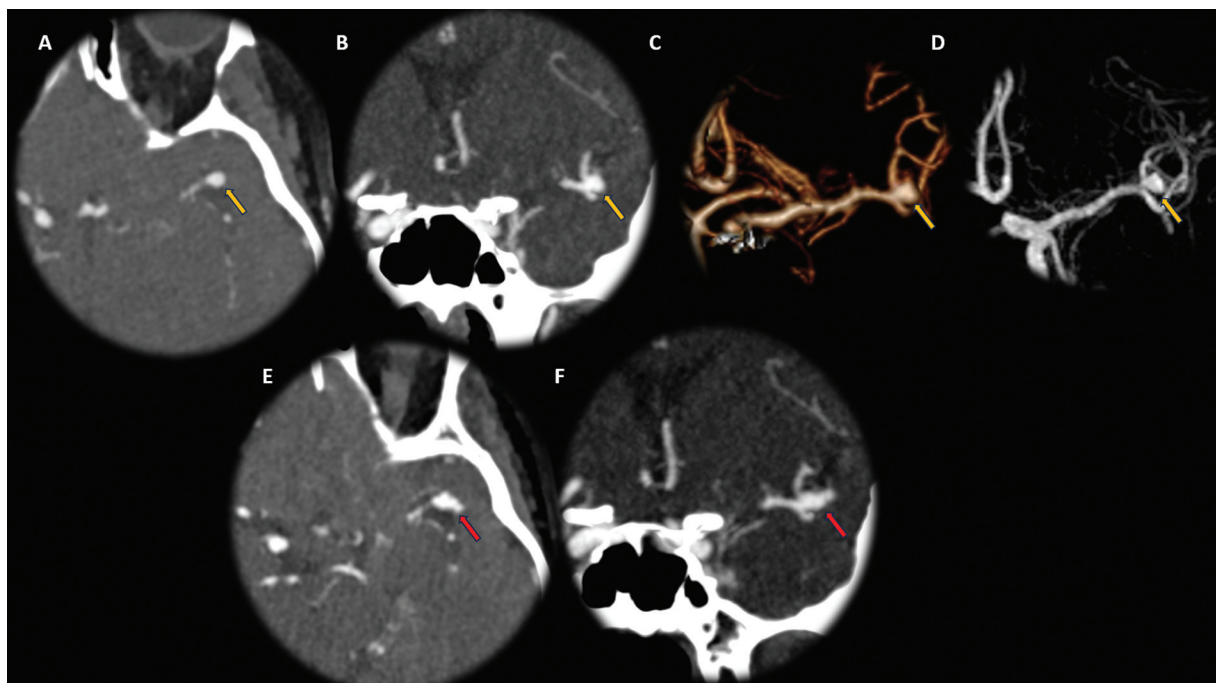


Figure 1 Previous head computed tomography angiography (CTA) (A–C) and head magnetic resonance angiography (MRA) (D); head CTA (E–F) follow-up on acute presentation. Increased size and new lobulation of the saccular left middle cerebral artery (MCA) aneurysm bifurcation (orange and red arrows).

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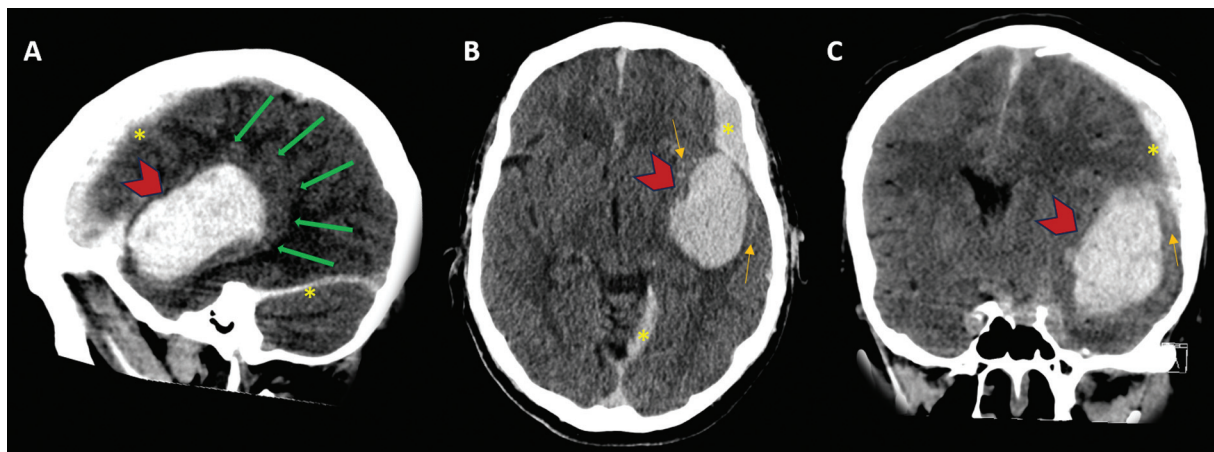


Figure 2 Head CT without IV contrast immediately after patient’s severe headache. Interval large acute hematoma along the left sylvian fissure, probably in the subpial compartment (red arrowheads). There was local mass effect with adjacent opercular cortex compression (green arrows). Small component of subdural (yellow asterisks) and subarachnoid (orange arrows) hemorrhages were also visualized.

compartment (► **Figure 2**). The findings suggested aneurysm rupture.

Subpial hemorrhages happen within the potential space between the pia mater and cortex and are extremely rare in adults.¹ It is hypothesized that the presence of blood below the pia may damage thin arteries, with secondary bleeding and

hemorrhage expansion.² They may cause injury to the cortex and severe edema and vasospasm, resulting in a poor prognosis (► **Figure 3**).¹⁻³

Authors’ Contributions

JAS: conceptualization or design of the work, data acquisition, and writing the manuscript; TPR: conceptualization or design of the work, and data acquisition; MDB: conceptualization or design of the work, data acquisition, and analysis or interpretation; JEM: conceptualization or design of the work, data acquisition, and analysis or interpretation; LFF: analysis or interpretation, and review of the manuscript. All authors approved the final version of the manuscript and agree to be responsible for all aspects of the work.

Conflict of Interest

The authors have no conflict of interest to declare.

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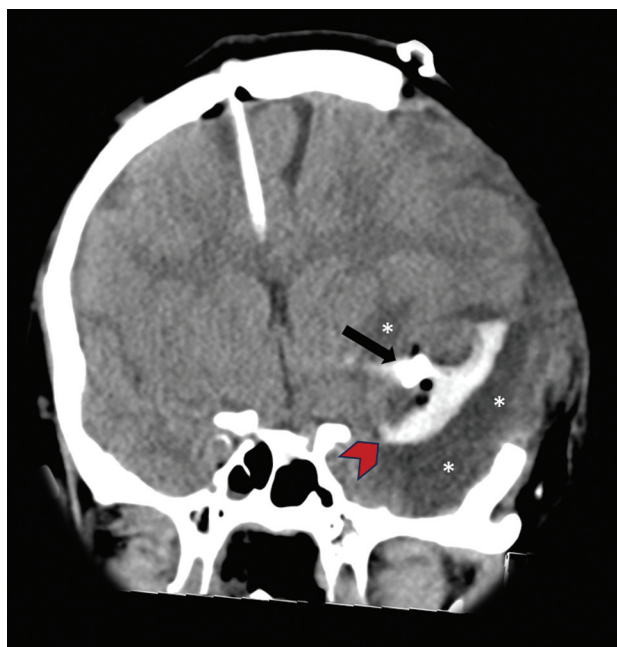


Figure 3 Immediate post operative CT head showing left decompressive craniectomy, right frontal ventriculostomy, aneurysm clipping (black arrow), and partial left sylvian fissure subpial hematoma evacuation (red arrowhead). Note is made for significant edematous changes along the left temporal and insular lobes (white asterisks).