

Which Aneurysm Ruptured?

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1. Abstract

Intracranial aneurysms are high-pressure vascular lesions that may rupture and present with acute symptomatology that requires urgent surgical intervention. However, not all unruptured intracranial aneurysms must be treated. Thus, patients who present with diffuse subarachnoid hemorrhage in the presence of multiple intracranial aneurysms may require extensive analysis to determine the status and optimal management strategy for each aneurysm. In this clinical image, we illustrate the concept of post-hemorrhage spontaneous aneurysm thrombosis in the setting of multiple PICA aneurysms, which was used to determine the site of rupture and guide management of the additional, likely unruptured aneurysm.

2. Text

A 64-year-old woman experienced a thunderclap headache. CT/CTA demonstrated subarachnoid hemorrhage (SAH) and bilateral PICA aneurysms (**Figure 1ABC**). The following morning, catheter angiography demonstrated spontaneous obliteration of the larger, right PICA aneurysm but preservation of the smaller, left PICA aneurysm (**Figure 1DE**). Follow-up MRI demonstrated thrombus formation (**Figure 1F**). The hemorrhage source may not be clear in the presence of diffuse SAH and multiple aneurysms. However, spontaneous aneurysm thrombosis after rupture has been previously reported [1-3], thus, we believe that the right PICA aneurysm ruptured, and the resulting inflammatory response obliterated the aneurysm. Accordingly, the left PICA aneurysm was managed conservatively.

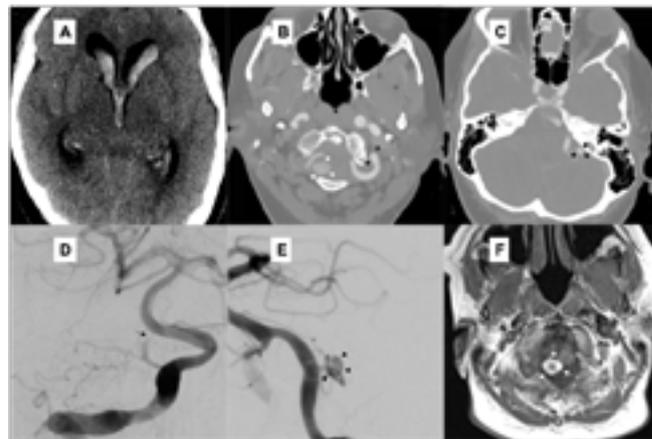


Figure 1: CT (A) demonstrated SAH, and CTA (B,C) demonstrated right (white arrowheads) and left PICA aneurysms (black arrowheads). Left (D) and right (E) vertebral artery injection demonstrated spontaneous obliteration of right PICA aneurysm (black arrow) but preservation of left PICA aneurysm (black arrowheads). Follow-up MRI (F) showed thrombus formation (white arrows).

References

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