

Case	(160) Cerebral mycotic aneurysm rupture
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CASE PRESENTATION

25 yo male presented to the emergency department with fever, aphasia, headache, and visual disturbances. Left subcortical parietal hematoma was described at noncontrast CT.

Angio CT was also performed describing two distal aneurysms depending on M4 branches of middle cerebral artery (MCA), one within the hematoma. Endocarditis has been suspected and a Gram-positive *Streptococcus* grew at blood culture. At echocardiogram mitroaortic junction abscess, vegetations on a bicuspid aortic valve and a severe aortic insufficiency were visualized.

Brain hematoma and one aneurysm were surgically removed before arteriography, where the other aneurysm was embolized with coils. Finally aortic and mitral valves were replaced by a mechanical prosthesis.

DISCUSSION

Intracranial infectious aneurysms (IIA) are rare infectious cerebrovascular lesions (0.7–5.4% of all intracranial aneurysms) which arise through microbial infection of the cerebral arterial wall.

The majority of IIA originating from gram-positive bacterial endocarditis, mostly *Staphylococcus aureus* and *Streptococcus* species, with septic emboli preferentially lodging at distal branch points in the MCA. Septic emboli access the adventitial wall via vasa vasorum.

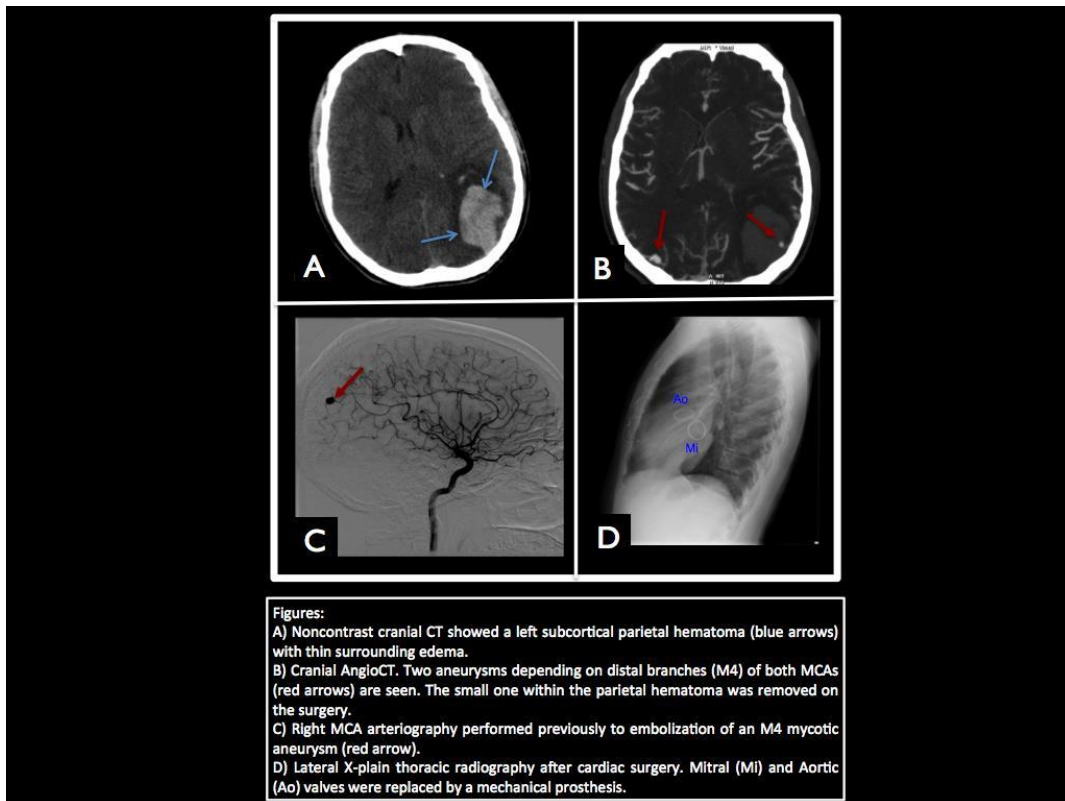
The arterial wall degradation secondary to microbial infection and hydrostatic pulsation promotes aneurysmal development typically thin-walled and friable, with a wide neck and a high tendency to rupture and hemorrhage. IIA are less commonly result from direct extension of intracranial bacterial infections such as meningitis or sinus thrombophlebitis, often in immunosuppressed patients.

There is a lack of consensus regarding the management of IIAs especially by the possible need for postoperative anticoagulation maintenance. For this reason, cardiac surgery after aneurysm management rather than before is strongly favored, and most often follows endovascular management.

Resection of an aneurysm is often undertaken with consequent vessel sacrifice and is performed in a ruptured aneurysm with a significant mass effect hematoma.

CONCLUSION

In a patient with fever and distal aneurysms, infectious origin has to be suspected.



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