

Heart-shaped intracranial aneurysm

Aneurisma intracraniano em forma de coração

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A 45-year-old woman presented with severe headache for three hours. Non-contrast brain CT revealed subarachnoid hemorrhage, mostly in the prepontine cistern (Figure A). A catheter-based angiogram showed a heart-shaped aneurysm arising from the junction of the basilar artery and the left superior cerebellar artery (Figures B and C), which was then coiled uneventfully (Figure D).

Cerebral aneurysm with a heart-shaped configuration is interesting and extremely rare, which is usually associated with vessel-wall degeneration under hemodynamic stress¹. Surgical clipping is challenging because of the complex anatomic environment and fragile aneurysmal wall; while an endovascular procedure, as a straightforward option, seems to be feasible and effective^{2,3}.

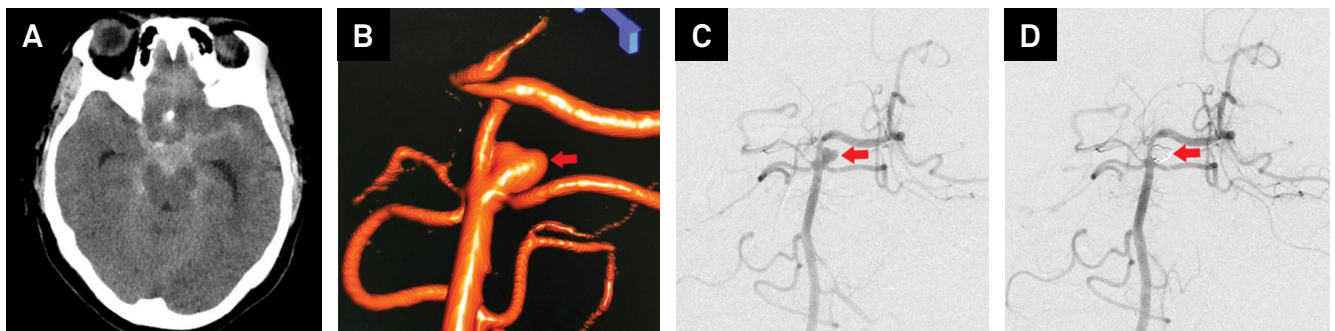


Figure. (A) Non-contrast head CT shows subarachnoid hemorrhage in the prepontine cistern. (B-C) Catheter-based angiogram shows a heart-shaped saccular aneurysm (arrows) originating from the bifurcation of the basilar artery and the left superior cerebellar artery. (D) Postoperative angiogram shows the aneurysm (arrow) coiled successfully.

References

- Vajkoczy P, Hartmann M. An unusual saccular aneurysm. *N Engl J Med*. 2002 Feb;346(7):497. <https://doi.org/10.1056/NEJMicm010008>
- Fu C, Zhao C, Zhao H, Li D, Yu W. Growing dissecting aneurysm of basilar trunk treated with stent-assisted coiling. *J Stroke* *Cerebrovasc Dis*. 2015 Jan;24(1):e5-9. <https://doi.org/10.1016/j.jstrokecerebrovasdis.2014.07.033>
- Gong D, Yan B, Dowling R, Mitchell P. Successful treatment of growing basilar artery dissecting aneurysm by Pipeline flow diversion embolization device. *J Stroke Cerebrovasc Dis*. 2014 Jul;23(6):1713-6. <https://doi.org/10.1016/j.jstrokecerebrovasdis.2013.11.019>

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