Article published online: 2023-08-21

https://doi.org/10.1590/0004-282X20190007

Heart-shaped intracranial aneurysm

Aneurisma intracraniano em forma de coração

Zheng Feng[1], Guibo Lin[2], Ke Meng[3], Weidong Yu[3], Chao Fu[3]

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 stress[1]. 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].

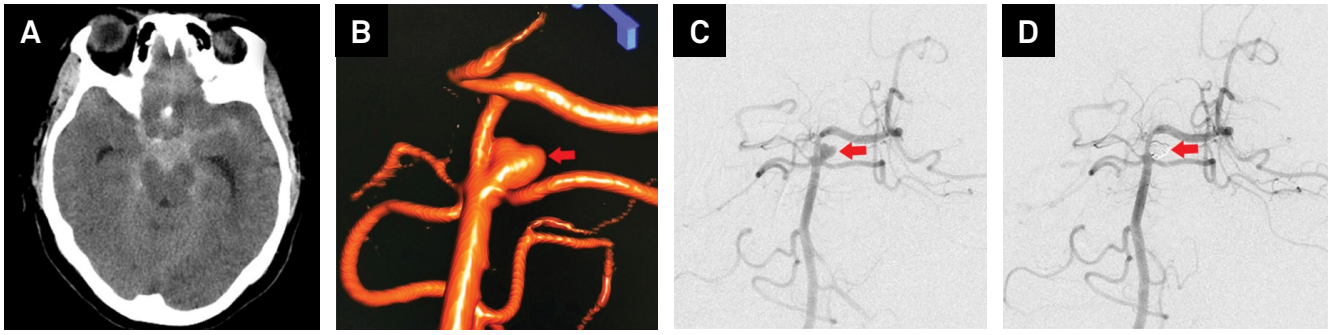

Figure. (A) Non-contrast head CT shows subarachnoid hemorrhage in the prepontine cistern. (B-C) Catheter-based angiogram shows a heart-shaped saccular aneurysm (arrows) originating from the bifurcation of the basilar artery and the left superior cerebellar artery. (D) Postoperative angiogram shows the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

References

1. Vajkoczy P, Hartmann M. An unusual saccular aneurysm. N Engl J Med. 2002 Feb;346(7):497. https://doi.org/10.1056/NEJMicm010008
2. 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
3. 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

[1]China-Japan Union Hospital of Jilin University, Department of Pediatrics, Changchun, China;
[2]China-Japan Union Hospital of Jilin University, Department of Rehabilitation, Changchun, China;
[3]China-Japan Union Hospital of Jilin University, Department of Neurosurgery, Changchun, China.

Chao Fu https://orcid.org/0000-0003-1022-4350

Correspondence: Chao Fu; Department of Neurosurgery, China-Japan Union Hospital of Jilin University, No. 126 Xiantai Street, Changchun 130033, Jilin Province, China; E-mail: fc616@126.com

Conflict of interest: There is no conflict of interest to declare.

Received 28 August 2018; Accepted 01 October 2018.