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Carotid artery direct access for intracranial stenting of a stroke patient with an aberrant left common carotid artery and right aorta

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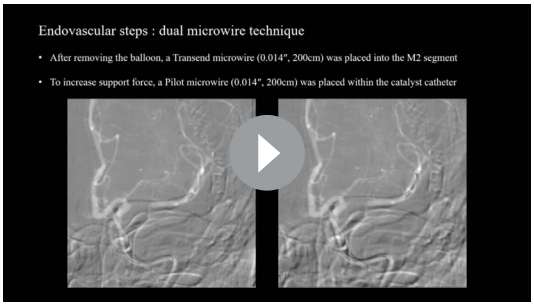
A right aortic arch is present in 0.1% of the population and can occur in isolation or be associated with congenital heart disease.[1] Moreover, the most common form of right aortic arch in adults is associated with an aberrant left subclavian artery.[1] An aberrant left common carotid artery that originated from the ascending aorta with the right aorta is very rare. In this situation, carotid direct access was considered to avoid access challenge due to a large curve from the ascending aorta to the left common carotid artery.[2 3] Here we demonstrate carotid artery direct access for intracranial stenting of a stroke patient with aberrant left common carotid artery and right aorta. Manual compression with a long time under general anesthesia to avoid post-procedural puncture site hematoma is recommended (video 1).



Video 1 Carotid artery direct access

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Ethics approval This study involves human participants and the technical video was approved by the Institutional Review Board of Beijing Tiantan Hospital, Capital Medical University. Approval ID number: QX2022-021-02. Participants gave informed consent to participate in the study before taking part.

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REFERENCES

1 Kanne JP, Godwin JD. Right aortic arch and its variants. *J Cardiovasc Comput Tomogr* 2010;4:293–300.
2 Mokin M, Snyder KV, Levy EI, *et al*. Direct carotid artery puncture access for endovascular treatment of acute ischemic stroke: technical aspects, advantages, and limitations. *J Neurointerv Surg* 2015;7:108–13.
3 Roche A, Griffin E, Looby S, *et al*. Direct carotid puncture for endovascular thrombectomy in acute ischemic stroke. *J Neurointerv Surg* 2019;11:647–52.