Teaching NeuroImages: Unilateral agenesis of internal carotid artery with ophthalmic artery from opposite side

A 42-year-old man with a 3-day history of gradual left-sided blindness was suspected to have internal carotid artery (ICA) chronic occlusion by magnetic resonance angiography. Catheter angiography showed that the left ICA was totally absent with the ipsilateral ophthalmic artery arising from the right ICA, and the left ICA territory was supplied by the right anterior communicating artery and the left posterior communicating artery (figure, A–C). Absence of the left carotid canal on CT proved the left ICA agenesis (figure, D). The patient was diagnosed with optic neuritis, and eyesight improved after medical treatment.

Congenital absence of ICA includes agenesis and aplasia. Absent carotid canal on CT distinguishes agenesis from aplasia.

AUTHOR CONTRIBUTIONS
Dr. Zhou: study concept and design, acquisition of data, and critical revision of the manuscript for important intellectual content. Dr. Zhao: acquisition of data and critical revision of the manuscript for important intellectual content. Dr. Liu: study concept and design, acquisition of data, critical revision of the manuscript for important intellectual content, and study supervision. Dr. Shi: study concept and design, critical revision of the manuscript for important intellectual content, and study supervision.

From the Radiology Department, the First Affiliated Hospital of Nanjing Medical University, Nanjing, Jiangsu Province, China.
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REFERENCES
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