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Eversion endarterectomy of a segmental occlusion of internal carotid artery patent due to an aberrant ascending pharyngeal artery: a case report

Slobodan Tanaskovic, MD, PhD,[a,b] Mihailo Neskovic, MD,[a] Igor Atanasijevic, MD, PhD,[a] Srdjan Babic, MD, PhD,[a,b] Vladimir Mihailovic, MD,[b] *and* Nenad Ilijevski, MD, PhD,[a,c]
Belgrade, Serbia

Type II segmental internal carotid artery (ICA) occlusion has been described by Kniemeyer et al[1] as total occlusion of the ICA at the carotid bifurcation with delayed orthograde filling through atypical collateral vessels of the proximal ICA. We present a rare case of segmental ICA occlusion with an aberrant ascending pharyngeal artery (APA) that maintains the patency of the distal ICA.

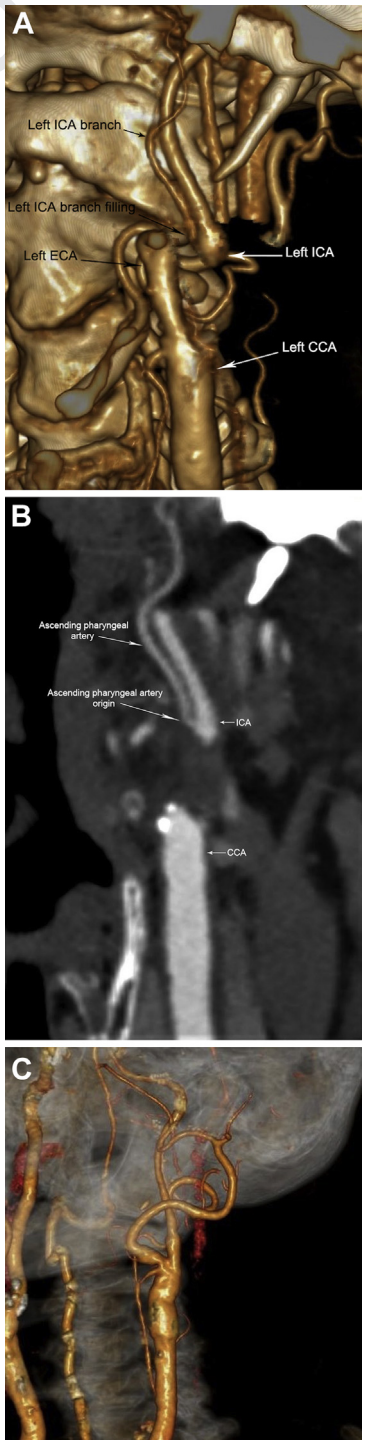
CASE REPORT

The institutional ethics committee of the Institute for Cardiovascular Diseases Dedinje approved the report of the present case, and the patient provided written informed consent for the report of her case and accompanying images.

A 71-year-old female patient was admitted to our institution for multidetector computed tomography (MDCT) angiography of the supra-aortic branches. One month before that admission, she had experienced a transient ischemic attack with right-sided weakness. Brain computed tomography showed no ischemic lesions. Color duplex ultrasound of the carotid arteries revealed complete occlusion of the ICA's proximal segment with a suspected distal ICA that was patent owing to an aberrant extracranial branch. Retrograde flow in the aberrant ICA branch was noted by color duplex ultrasound, producing antegrade flow in the distal ICA beyond the occlusion. She had previously been treated for diabetes, hypertension, dyslipidemia, and renal insufficiency (serum creatinine, 132 μmol/L). MDCT angiography revealed complete occlusion of the proximal ICA with the aberrant extracranial ICA branch maintaining the patency of the distal ICA (*A*/Cover). Because of the vertical course of the ICA and to the pharyngeal side with termination at the base of the skull, we concluded that the aberrant ICA branch was actually the APA (*B*).

During the surgery, after transecting the ICA from the bifurcation, no back bleeding occurred. However, after eversion endarterectomy, excellent outflow was obtained from the ICA with back bleeding clearly visible also from the APA. The procedure was completed in the usual manner. The postoperative MDCT showed normal findings (*C*).

Surgical treatment of type II segmental ICA occlusion has satisfactory outcomes.[2,3] In contrast, an APA originating from the cervical ICA has been reported in 2% of specimens during the autopsy.[4,5] In our patient, the aberrant APA maintained a distal ICA flow, limiting the occlusion to the proximal ICA only, making eversion endarterectomy feasible with a favorable outcome.



REFERENCES

1. Kniemeyer HW, Aulich A, Schlachetzki F, Steinmetz H, Sandmann W. Pseudo- and segmental occlusion of the internal carotid artery: a new classification, surgical treatment and results. Eur J Vasc Endovasc Surg 1996;12:310-20.

From the Vascular Surgery Clinic[a] and the Faculty of Medicine, University of Belgrade[b] and Clinic for Radiology, Institute for Cardiovascular Diseases Dedinje.[c]

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Correspondence: Slobodan Tanaskovic, MD, PhD, Vascular Surgery Clinic, Institute for Cardiovascular Diseases Dedinje, Heroja Milana Tepica 1 St, Belgrade 11000, Serbia (e-mail: drslobex@gmail.com).

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2. Babić S, Tanasković S, Nešković M, Gajin P, Nenezić D, Stevanović P, et al. Surgical treatment of proximal segmental occlusion of the internal carotid artery. Surg Res Pract 2019;2019:2976091.
3. Patel MC, Higgins JN, Kirkpatrick PJ. Endarterectomy of an occluded ICA: short segment occlusion with distal patency maintained by an aberrant ascending pharyngeal artery. Interv Neuroradiol 1999;5:157-9.
4. Bowen JC, Garcia M, Garrard CL, Mankin CJ, Fluke MM. Anomalous branch of the internal carotid artery maintains patency distal to a complete occlusion diagnosed by duplex scan. J Vasc Surg 1997;26:164-7.
5. Sirasapalli CN, Mandapal T, Parida S, Belman M. Anatomical variant: ascending pharyngeal artery arising from the extracranial internal carotid artery. Indian J Vasc Endovasc Surg 2017;4:127-8.

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