Teaching *NeuroImages*: Simultaneous angiography and ultrasonography in extracranial internal carotid artery dissection

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Figure 1 Findings of left ICA on transoral carotid ultrasonography (TOCU) and cervical MRI

TOCU performed using advanced dynamic flow imaging shows the true lumen (asterisks) and intramural hematoma (double arrows) (A), which is consistent with hematoma on the fat-saturated T1-weighted axial cervical MRI (B).

A 26-year-old woman was admitted with amaurosis fugax in the left eye and transient aphasia. Diffusion-weighted MRI revealed a small infarction in the left insular cortex. Transoral carotid ultrasonography (TOCU)¹ demonstrated left ICA dilatation with narrowing of the true lumen and intramural mass (figure 1A), which was consistent with hematoma on T1-weighted MRI (figure 1B). Angiography, performed immediately after TOCU, showed luminal carotid stenosis as on TOCU (figure 2) and a diagnosis of ICA dissection was made. Two months later, the TOCU findings were improved (figure e-1 on the *Neurology*[®] Web site at www.neurology.org).

Figure 2 Carotid angiography

Angiography, performed with attachment of transoral carotid ultrasonography (TOCU) probe tip to the pharyngeal wall (arrowhead), shows luminal carotid stenosis (arrow) similar to the TOCU finding.

TOCU may be useful for noninvasive detection and follow-up of extracranial ICA dissection.²

AUTHOR CONTRIBUTIONS

Takayuki Oka contributed to analysis, interpretation of data, and drafting the manuscript. Yusuke Yakushiji contributed to analysis, interpretation of data, and drafting the manuscript. Yusuke Nanri contributed to analysis and interpretation of data. Yukinori Takase contributed to analysis and interpretation of data. Hideo Hara contributed to drafting the manuscript. All authors have seen and approved the final version of the manuscript.

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Supplemental data at
www.neurology.org

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