



# Reversal of Bilateral Sudden Deafness with Thrombectomy

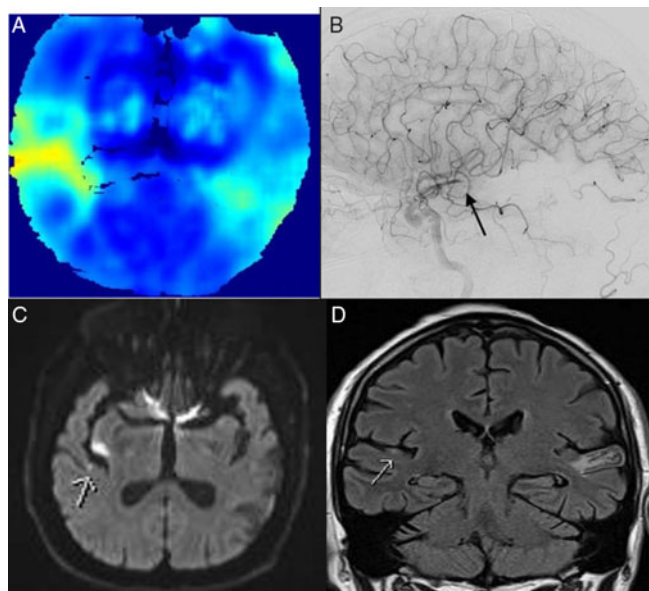
Rosalie E. Morrish , Raed A. Joundi , Christopher D. d'Esterre, Connor C. McDougall, William F. Morrish, Philip A. Barber, on behalf of the Calgary Stroke Program

**Keywords:** Stroke, stroke imaging, endovascular, auditory neuroscience

doi:10.1017/cjn.2021.14

Can J Neurol Sci. 2021; 48: 854

A 65-year-old man anticoagulated for atrial fibrillation and previous stroke presented with sudden deafness. Examination revealed normal fluent language, but he was deaf to intense sound. The computed tomography (CT) showed encephalomalacia in the left temporal lobe, and the multiphase CT angiogram revealed hypoperfusion in the superior right temporal lobe (Figure 1A) causing the acute deafness. Thrombectomy successfully recanalized the MCA branch occlusion (Figure 1B) with the return of the patient's hearing. Magnetic resonance imaging (MRI) confirmed the acute infarct in the right Heschl's gyrus (Figure 1C/D) and the chronic left transverse temporal gyrus infarct (Figure 1D). Sudden deafness is an uncommon, but treatable presentation of stroke.<sup>1</sup>



**Figure 1:** CTA perfusion image (SPIRAL)<sup>2</sup> showing right superior temporal lobe hypoperfusion (A). Right internal carotid catheter angiogram (B) demonstrating right posterior M3 branch occlusion. Diffusion weighted image (C) showing small right transverse temporal gyrus acute infarct following thrombectomy. Coronal FLAIR MRI (D) demonstrating acute right temporal and chronic left contralateral infarcts.

## DISCLOSURES

The authors have no conflicts of interest to declare.

## STATEMENT OF AUTHORSHIP

REM: drafting and revision of manuscript. RAJ: data collections and interpretation; revision of manuscript. CDdE: data collection and interpretation. CCM: data collection and interpretation. WFM: revision for intellectual content; data collection. PAB: data collection; drafting and revision of manuscript.

## REFERENCES

1. Leussink V, Andermann P, Reiners K, et al. Sudden deafness from stroke. *Neurology*. 2005;64(10):1817–18.
2. McDougall C, Chan L, Sachan S, et al. Dynamic CT angiography derived perfusion maps predict final infarct volume – the simple perfusion reconstruction algorithm (spiral). *Am J Neuroradiol*. 2020;41:2034–40.

From the Clinical Neurosciences, University of Calgary, Calgary, Alberta, Canada (REM, RAJ, CDdE, CCM, PAB); and Diagnostic Imaging, University of Calgary, Calgary, Alberta, Canada (WFM)

RECEIVED DECEMBER 23, 2020. DATE OF ACCEPTANCE JANUARY 15, 2021.

Correspondence to: Philip Barber, Foothills Medical Centre, Room 1212, Calgary, Alberta T2N 4N1, Canada. Email: [pabarber@ucalgary.ca](mailto:pabarber@ucalgary.ca)