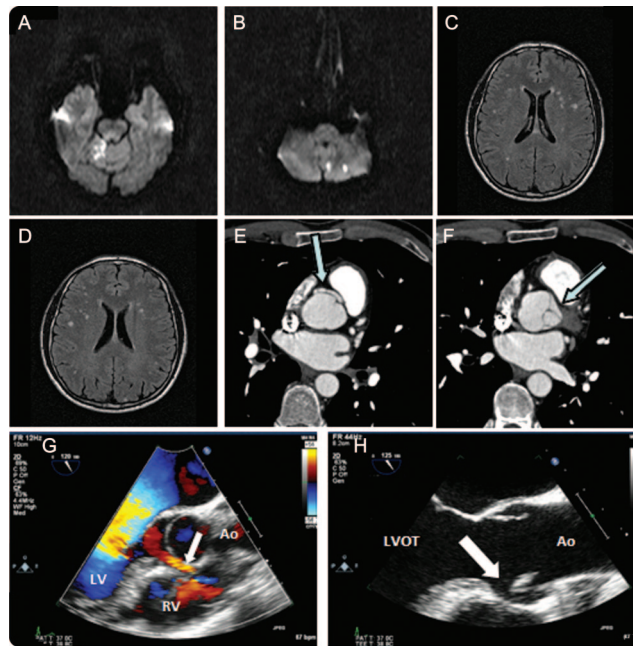


# Aorto-left-ventricular tunnel

A rare cause of cardioembolic stroke in a 42-year-old patient



**Figure** Interdisciplinary stroke imaging



(A, B) Diffusion-weighted MRI with acute cerebellar lesions. (C, D) Fluid-attenuated inversion recovery-weighted MRI displaying multiple older lesions. (E, F) Cardio-CT displaying the apical orifice of the aorto-ventricular tunnel (AVT) (E) and the junction with the left ventricular outflow tract (LVOT) (F). (G, H) Echocardiography displaying the AVT (arrow). Ao = Aorta; LV = left ventricle; RV = right ventricle.

A 42-year-old man presented with acute ataxia resulting from an embolic stroke without classic vascular risk factors but revealing a hitherto clinically asymptomatic aorto-ventricular tunnel, which is defined by a hereditary connection between the ascending aorta and one of the ventricles (figure).<sup>1</sup> We postulate that blood turbulences around the tortuous tunnel with a stenotic component and low flow areas caused cardiogenic cerebral emboli. Although no specific guidelines exist, we consider a surgical treatment approach as applied before by Nezafati and colleagues<sup>2</sup> as reasonable in the presence of ongoing, multifocal ischemic events.

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*Author contributions:* Dr. Wollenweber treated the patient and drafted, wrote, and finally revised the manuscript. Dr. Brehmer, Prof. Dr. Mühler, Dr. Werner, Prof. Dr. Hoffmann, Prof. Dr. Schulz, and Dr. Reich all made substantive intellectual contribution to the Video NeuroImage by treating the patient and revising the manuscript.

*Disclosure:* Dr. Wollenweber, Dr. Brehmer, Prof. Dr. Mühler, Dr. Werner, and Prof. Dr. Hoffmann report no disclosures. Prof. Dr. Schulz serves on a scientific advisory board for Lundbeck Inc.; has received funding for travel and speaker honoraria from Merz Pharmaceuticals, LLC, GlaxoSmithKline, and Pfizer Inc; serves as Editor-in-Chief of the *Journal of Neuroscience* and on the editorial advisory board of the *Journal of Neurochemistry*; and receives research support from BMBF. Dr. Reich reports no disclosures.

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F.A. Wollenweber, K. Brehmer, E. Mühler, et al.  
*Neurology* 2011;76;2129  
DOI 10.1212/WNL.0b013e31821f46a5

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