Recurrent cryptogenic stroke in young adult linked to congenital left ventricular diverticulum

Figure 1 Brain MRI showing both recurrent acute symptomatic and silent old infarctions within multiple territories

(A) DWI (left top), ADC color map (right top), and fluid-attenuated inversion recovery (left below) showing right rolandic acute infarction (arrowhead), and former silent infarctions within left middle cerebral and left posteroinferior cerebellar arteries (below, arrows). (B) DWI (left top) and ADC map showing second left rolandic acute infarction (arrowhead). ADC = apparent diffusion coefficient; DWI = diffusion-weighted imaging.

A 47-year-old man had an acute ischemic stroke (IS); brain MRI revealed multiple silent old IS (figure 1A). A comprehensive workup, including prolonged cardiac monitoring (cumulated duration of 25 days) and cardiac transthoracic/transesophageal echography, was negative. Eleven months later, despite statin and aspirin therapy, a new symptomatic embolic IS of undetermined source occurred (figure 1B). Cardiac MRI¹ revealed a left apical dyskinetic saccular evagination (figure 2, A–C) consistent with a congenital left ventricular diverticulum

Figure 2 Cardiac MRI and left ventriculography revealing an LVD

Cardiac MRI: (A) (diastolic phase 4-chamber plane) and (B) (systolic phase 2-chamber plane) showing apical ventricular dyskinetic saccular evagination consistent with LVD (arrows). (C) Delayed-enhancement cardiac magnetic resonance, 4-chamber view, postgadolinium-delayed image without enhancement of the diverticular and left ventricular walls. Left ventriculography (D) confirming LVD: diastolic (left) and systolic frame (right) showing contrast stagnation within hypokinetic apical evagination during cardiac systole (arrows). LVD = left ventricular diverticulum.

confirmed on left ventriculography (figure 2D) and the presumed source of recurrent embolic IS.² No IS occurred after 30 months of warfarin therapy.

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