

Left Cardiac Sympathetic Denervation in a Pediatric Patient with Surgically Corrected D-Transposition of the Great Arteries and Recurrent Ventricular Tachycardia

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ABSTRACT

Left cardiac sympathetic denervation (LCSD) has been efficacious in treating ventricular tachyarrhythmias for patients with long QT syndrome, catecholaminergic polymorphic ventricular tachycardia, and some cardiomyopathies. In patients with a range of underlying substrates who have refractory ventricular tachyarrhythmias despite maximized medical and ablative therapies, there are limited options available for treatment beyond cardiac transplantation. We present a patient with D-transposition of the great arteries who underwent arterial switch procedure in infancy and 12 years later developed refractory ventricular tachycardia (VT) and VT storm despite multiple ablations and maximized medical therapy. Despite a history of multiple previous cardiac surgeries resulting in significant adhesions, a videoscopic LCSD was performed. There was complete resolution of VT following LCSD. This dramatic response indicates that LCSD may be beneficial in pediatric patients with refractory ventricular tachyarrhythmias with a variety of underlying substrates including congenital heart disease and that prior cardiac surgery is not a contraindication to a minimally invasive approach to LCSD.

KEY WORDS

Pediatric, Left Cardiac Sympathetic Denervation, Ventricular Tachycardia