Reversal of Tachycardiomyopathy in a Patient with Incessant Form Ventricular Tachycardia Originating from Left Sinus of Valsalva after Successful Ablation Guided by EnSite NavX System

Sugako Ishigaki1, Satoshi Higa1, Nobumori Yagi3, Akira Maesato1, Ichiro Chinen1, Yenn-Jiang Lin2, Kazuhiyo Tatsu1, Kotaro Obunai1, Yoichi Uechi1, Moriichi Sugama1, Shih-Ann Chen2

1Division of Cardiovascular Medicine, Electrophysiology Laboratory, Makiminato Central Hospital, Okinawa, Japan, 2Taipei Veterans General Hospital, Division of Cardiology, Taipei, Taiwan, 3Nakagami Hospital, Okinawa City, Okinawa

Introduction: Incessant form of ventricular tachycardia (VT) is relatively uncommon and can be a cause of tachycardiomyopathy. Methods: N/A. Results: We experienced incessant form of VT originating from left sinus of Valsalva in a 16-year-old man. He complained mild palpitation and dizziness during exercise. Repeated 24h-Holter monitoring demonstrated incessant form of VT (36 to 43% of total HR) recent 3 years. The electrophysiological study demonstrated spontaneous onset of incessant VT without any pacing maneuver and VT rate acceleration during isoproterenol infusion. EnSite NavX system demonstrated isochronal mapping demonstrated the earliest activation site during VT at left sinus of Valsalva, and voltage mapping revealed the earliest activation site located at border zone of low voltage area (<0.5mV). Temperature-controlled RF energy (<30W) applications successfully eliminated VT and PVC under high dose isoproterenol infusion without any complication and recurrence. During follow-up period 13 months, CTR improved from 48 to 36%, LVDd from 59 to 53mm, and LVEF from 44 to 55%. Conclusion: Total elimination of incessant form of VT/PVC revealed reversal of tachycardiomyopathy. Keywords: ventricular tachycardia, tachycardiomyopathy, 3D mapping system