Remote Magnetic Navigation for Mapping and Ablation of Outflow Tract Ventricular Arrhythmia

Wee Siong Teo, Amit Malik, Daniel Chong, Reginald Liew, Chi Keong Ching
National Heart Centre, Singapore

Catheter ablation provides curative treatment of outflow tract VT or frequent symptomatic ventricular arrhythmias. The remote magnetic navigation system (Stereotaxis) involves moving a catheter with a magnetic tip inside a 0.08-0.1 Tesla magnetic field and mapping done with the CARTO and ablation with a coolflow catheter. We report our experience with the Stereotaxis from July 2009 to May 2011 for ablation of outflow tract VA. There were 42 pts (19 males: 23 females) with a mean age of 45.0 + 13.8 years. The arrhythmias were RVOT VT in 37, aortic cusp VT 4 and aorto-mitral in 1. 72% of the patients had the procedure done with a single catheter only. The mean procedure time was 160.7 + 69.6 mins (range 63-330 mins) and mean fluoroscopy time 15.4 + 22.0 mins (range 1.0 - 120 mins). When compared to a previous group of 44 outflow tract VT ablation using manual technique, the mean procedure time was 153.9 + 55.4 mins (80-285 mins) and mean fluoroscopy time was 39.3 + 25.8 mins (10.9-117.6 mins). Acutely 92.8% of the cases were successfully ablated. There were no major complications. In conclusion, remote magnetic navigation with the Stereotaxis allows precise mapping and successful ablation in the majority of pts with outflow tract ventricular arrhythmias. The procedure time is not reduced significantly but there is a reduction in fluoroscopy time.

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