

Catheter Ablation of Ventricular Tachycardia in Children Using a Limited Fluoroscopy Approach

*Akdeniz C., Ozyilmaz I., Ergul Y., Ozturk E., Tanidir I.C., Tuzcu V.
Mehmet Akif Ersoy Cardiovascular Research and Training Hospital, Istanbul, Turkey*

Introduction: Ventricular tachycardia (VT) can cause significant morbidity and mortality in the pediatric population. Curative therapy of VT can still be challenging in interventional electrophysiology. The aim of this study was to review our experience in catheter ablation of VT in children using the EnSite (St. Jude Medical, St Paul, MN) system.

Methods: Ten consecutive children with VT underwent radiofrequency catheter ablation using the EnSite system guidance in addition to fluoroscopy. EnSite system allowed us to either eliminate or significantly decrease fluoroscopy exposure besides its help in electroanatomical mapping.

Results: The origin of VT was in the right ventricular outflow tract in 6 patients, left ventricle in 3, and left aortic cusp in 1. The mean age and weight were 15 ± 2 years (range: 12 to 17) and 57.8 ± 6.4 kg, respectively. The mean procedure and fluoroscopy durations were 170.6 ± 53.2 minutes and 12 ± 14 minutes, respectively. No fluoroscopy was used in 3 patients. The acute success rate was 8/10 (80%). In 2 failed procedures, VT focus was epicardial. Recurrence was noted in 3 patients at a follow-up of 9 ± 7 months. Two of these patients underwent successful second procedures. The focus was epicardial and adjacent to the left main coronary artery in the third patient who had recurrence. Further procedure was not done to prevent coronary artery injury.

Conclusions: Catheter ablation of VT can be performed safely and effectively and with low fluoroscopy exposure in children using the EnSite system.