

Cryoablation with an 8-mm-tip Catheter for Right-Sided Accessory Pathways in Children

Tanidir I.C.(1), Ergul Y. (1), Ozturk E. (1), Dalgic F. (2), Kiplapinar N. (1), Tola H.T. (1), Guzeltas A. (1), Akdeniz C. (2), Tuzcu V. (2)

(1)Department of Pediatric Cardiology, Istanbul Mehmet Akif Ersoy Thoracic and Cardiovascular Surgery Center and Research Hospital, Istanbul, Turkey

(2)Department of Pediatric Cardiology and Electrophysiology, Istanbul Medipol University Hospital, Istanbul, Turkey

Introduction: Cryoablation is increasingly utilized in children because of its safety profile. Recently, larger-catheter tips have been more widely used to improve long-term success rates. The aim of this study was to assess the safety and efficacy of 8-mm-tip catheters for cryoablation of right-sided accessory pathways (APs) in children. Methods: Electrophysiological procedures were performed using the EnSite™ system (St. Jude Medical Inc., St. Paul, MN, USA). Results: Between July 2010 and July 2014, 54 patients (mean age: 13.1 ± 3.7 years) underwent cryoablation using an 8-mm-tip catheter. In 18/54 (33%) patients where an 8-mm-tip catheter was the first-choice catheter, the acute success rate was 18/18 (100%). There was a history of previous failed attempts or recurrence with radiofrequency ablation and/or 6-mm-tip cryoablation in 36/54 (67%) patients. The acute success rate in these patients was 24/36 (67%). No fluoroscopy was used in 34/54 procedures. The recurrence rate was 6/42 (14%) during a mean follow-up period of 32 ± 15 months. In 1 patient, transient atrioventricular block occurred. Conclusions: Cryoablation with an 8-mm-tip catheter for right-sided APs in children who weight over 40 kg appears to be safe and acutely effective in cases where conventional ablation methods fail and also as a first choice for ablation procedure. However, the recurrence rate still seems to be high.