

Long-term single centre study on epicardial pacing leads in children and patients with congenital heart disease

Fink B. (1), Schneider W.(2), Ziemer G.(2), Gass M. (1), Hofbeck M. (1), Kerst G. (1)

Department of Pediatric Cardiology, University Children's Hospital Tuebingen, Tuebingen, Germany (1); Department of Thoracic, Cardiac and Vascular Surgery, University Hospital Tübingen, Tübingen, Germany (2)

Introduction: Data on permanent epicardial pacing in young patients is limited with respect to long-term lead-survival, types of pacing leads and study size. We report on a 17-year single centre experience with various epicardial pacing leads in 215 patients. □

Methods: We retrospectively reviewed all epicardial leads implanted in our centre between 1993 and 2010. A total of 215 patients (median age at implantation 5.2 years, range 1 day to 28 years) underwent 371 epicardial lead implantations (105 atrial and 266 ventricular leads). Various leads (157 [42 %] screw-in, 214 [58 %] suture-on leads) were used. The number of former cardiac surgeries, the number of former lead implantations, the age at implantation and a Fontan-type of palliation were investigated as predictors for lead failure. □□

Results: During a median follow-up of 3.9 years (range 1 day to 15.6 years), lead failure was documented in 61 leads (16 %) with exit block/elevated pacing thresholds being the most common cause (n = 42). The only predictor for lead failure was ventricular lead position (HR 2.2, CI 1.1 – 4.2, p = 0.02). The overall 1-, 5-, 10- and 15-year lead survival was 98 %, 84 %, 73 % and 49 %, respectively. There was no difference in lead survival of screw-in and suture-on leads. There were no deaths related to lead dysfunction.

□□Conclusions: In our study of 371 epicardial leads, lead survival was good, with no difference in screw-in versus suture-on leads.