

MP3-3

Performance and survival of epicardial leads in pediatric patients and congenital heart disease patients. A 15 years single center experience with two unusual cases and a review of the literature.

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OBJECTIVE: Cardiac pacing is needed frequently in patients with congenital heart disease for various reasons, ranging from symptomatic bradycardia due to sinus node dysfunction or postoperative complete heart block to cardiac resynchronization therapy. As the use of epicardial leads has been discussed controversially as far as pacing performance and lead survival are concerned, the actual study addresses this topic. **DESIGN:** Retrospective chart review and review of the literature. **PATIENTS:** 84 consecutive pediatric or adult patients with congenital heart disease were included. This accounts for 164 epicardial pacemaker leads. **RESULTS:** We found (1,2%) pacemaker related early postoperative complications. The incidence of lead dysfunction was 7,3% (12/164) for primary and 3,04% (5/164) for secondary dysfunction. Primary dysfunction occurred after a median of 3,44 years (1,77 – 5,13). Reasons for primary lead dysfunction were lead fracture (n=10) and macrodislocation (n=2). There were no infections reported in this study group. Stable median measurements for impedance (RA/RV/LV of 577/482/610 Ohm), sensing threshold (RA/RV/LV of 2,0/11,0/10,6 mV) and pacing threshold (RA/RV/LV of 0,75V at 0,4ms/1,0V at 0,49ms/1,0V at 0,4ms) revealed a good mid- to longterm performance. The only risk factor for primary lead dysfunction identified, was young age at implantation. **CONCLUSION:** The use of epicardial leads in the setting of pediatric and adult patients with congenital heart disease shows comparable long-term outcomes and equal effectiveness as endocardial leads. Therefore the decision on whether to implant endo- or epicardial leads should rather be based on the patients individual characteristics than on technical aspects concerning lead performance or durability.