O8-6 *

Late recovery of surgical atrio-ventricular block is not exceptional

Vugts G. (1), van Geldorp I.E. (1), Vanagt W.Y. (1, 2), Meyns B. (2), Willems R. (2), Rega F. (2), Gewillig M. (2), Delhaas T. (1)
Maastricht University Medical Center, Maastricht, The Netherlands (1); University Hospital Leuven, Belgium (2)

Introduction: Surgical atrioventricular (AV) block may complicate cardiac congenital surgical procedures. It is generally considered permanent when AV-block persists beyond the 14th postoperative day. We studied the incidence of spontaneous late recovery of AV conduction after surgical AV-block.

Methods: We retrospectively reviewed our Pediatric Cardiology database for all cardiac surgical procedures between January 1993 and November 2010 in subjects <18 years old. All patients with 2nd or 3rd degree AV-block persisting beyond the 14th postoperative day were included. Late recovery was defined as recovery of AV conduction to normal or to first degree AV-block > 14 days postoperatively.

Results and discussion: During the study period, 2808 cardiac surgical procedures on cardiopulmonary bypass were performed. Beyond the 14th postoperative day, 2nd degree AV-block was present in 7 (0.25%) patients and 3rd degree AV-block in 68 (2.4%) patients. Late recovery of 2nd degree AV-block occurred in 3/7 patients (42.9%) after 2 months, 3 years and 6.5 years. Late recovery of 3rd degree AV-block occurred in 3/68 (4.4%) patients after 2 months, 3 months and 7 years.
The surgical procedures causing AV-block in the 6 patients with late recovery of AV conduction-block were: AV septal defect correction with mitral valve plasty in 3 (two 2nd and one 3rd degree AV-block), mitral valve plasty in 1 (2nd degree AV-block) and ventricular septal defect closure in 2 (both 3rd degree AV-block) subjects.
None of the patients with recovered AV conduction relapsed into 2nd or 3rd degree AV-block during the study period. Reprogramming of the pacemaker as a back-up device was possible, and prolonged pacemaker battery longevity.

Conclusion: Spontaneous late recovery of AV conduction in patients with surgical AV-block is not exceptional and should be searched for during chronic follow-up. Reprogramming the pacemaker to back-up at low rate prolongs pacemaker longevity. It still needs to be determined if pacing system replacement is indicated in case of exit block or battery depletion.

* CTY: P-18