

Surgical management of right partial anomalous pulmonary venous connection in adults: a single-centre experience

Parody Cuerda G. (1), Polo López L. (2), González Rocafort A. (2), Rey Lois J. (2), Sánchez Perez R. (2), Aroca Peinado A. (2)

Virgen Macarena University Hospital, Seville, Spain (1); La Paz University Hospital, Madrid, Spain (2)

Introduction: Right-sided partial anomalous pulmonary venous connection (RPAPVC) to superior vena cava (SVC) is a rare congenital cardiovascular anomaly. Surgery remains the strategy of choice. The main goal is to divert the anomalous pulmonary vein (PV) drainage to the left atrium. We sought to review our short and long-term outcomes after surgical repair of RPAPVC to SVC in adults.

Methods: Retrospective analysis of consecutive patients >14 years old with RPAPVC to SVC operated in our Adult Congenital Heart Unit (ACHU) from May 1996 to December 2017. Diagnosis was made with echocardiography in 100% and cardiac nuclear magnetic resonance in 95%. Catheterization was reserved for cases of doubtful operability and/or presence of cardiovascular risk factors. We indicate surgery if QP/QS>1,5 and no data of irreversible pulmonary hypertension. Different surgical techniques were applied based on localization of RPAPVC into SVC.

Results: We identify 51 patients; mean age: 39±17 years, males: 65%, preoperative arrhythmias: 20%, atrial septal defect: 80%, persistent left SVC: 16%, mean QP/QS: 2,2±0,6, mean systolic pulmonary artery pressure: 36±10mmHg). Techniques were; atrial patch closure from right atriotomy (33%), intra-caval baffle with venotomy (61%) and Warden procedure (6%). Eight (15%) patients presented postoperative arrhythmias- one needed permanent pacemaker for complete atrioventricular block. No patient required early percutaneous interventionism (PI) or early reoperation. There was no early mortality. Follow-up was completed in all patients (mean: 5,5±4,4 years, maximum: 17,6 years). PV obstruction occurred in one (2%) patient and SVC obstruction in two (4%). One (2%) patient precised late PI and two (4%) underwent late reoperation- one for pericardial cyst removal. One late death happened due to a non-cardiovascular cause. There was an improvement in NYHA class, tricuspid insufficiency and right ventricle function. Currently, there are no patient with residual PV obstruction and just two (4%) patients with residual SVC obstruction.

Conclusions: Surgical repair of RPAPVC to SVC in adults can be accomplished with excellent results in ACHU. Our choice of surgical approach depending on the localization of anomalous PV seems to be correct. Based on our experience we recommend atrial patch closure for lower drainages and intra-caval baffle for the highest ones.