PARTIAL ANOMALOUS PULMONARY VENOUS CONNECTION TO SUPERIOR VENA CAVA SURGERY IN ADULTS: OUR EXPERIENCE

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Objectives: Partial anomalous pulmonary venous connection (PAPVC) to superior vena cava (SVC) occurs in 10-15% patients with an atrial septal defect (ASD). PAPVC surgery aims to ensure a good drainage of the pulmonary veins (PPVV) into the left atrium, without residual shunt, neither residual SVC/PPVV stenosis, nor changes in heart rhythm. We present our experience with patients older than 14 years of age.

Material & Methods: Retrospective analysis of 26 patients with PAPVC to SVC operated in our Grown up Congenital Heart (GUCH) Unit during the last decade. Diagnosis was made with echocardiography 100% and cardio-resonance 85%. Catheterization was performed only in cases of doubtful operability and/or presence of coronary risk factors. Surgery is indicated if QP/QS >1,5 and there are clinical data of hemodynamic overload.

Results:
- Mean age: 37 ± 18 years, 65% males
- Associated pathology:
  - Arrhythmia: 19%
  - Moderate tricuspid insufficiency (TI): 11%
  - Double SVC: 19%
  - Functional NYHA class was I (54%), II (38%), III (8%).
- Preoperative studies:
  - ASD (88%)
  - QP/QS 2.3 ± 0.7
  - Systolic pulmonary pressure (PSP) 39 ± 10 mmHg.
- Surgery:
  - Median sternotomy with cardiopulmonary bypass and moderate hypothermia.
  - We used three surgical techniques:
    - SVC septation with venotomy (65%)
    - Warden (8%)
    - Septation from atriotomy (27%).
    - Tricuspid annuloplasty was associated in 11%.
- Hospital Mortality = 0.
- Two patients (8%): arrhythmia in the postoperative hospitalization.
- Mean postoperative intubation time was 9 ± 9 hours
- Mean intensive care stay was 2.7 ± 1.4 days
- Mean hospital stay was 8.3 ± 3 days

- Mean follow up is 44 ± 35 months.
- There was no late mortality
- During this period, 1 patient (4%) has developed SVC stenosis that was stented percutaneously. All others had normal drainage of the systemic and pulmonary veins.
- Currently
  - 89% patients are in NYHA class I and 11% in class II.
  - PSP values are normal
  - TI has improved (92% ≤ trivial, 4% mild, 4% moderate)

Conclusions:
- PAPVC surgery in our GUCH unit has good results (no mortality, minimal morbidity). In the postoperative follow up, the functional class improves, TI diminishes and PSP values reach normal values.
- Cardio-resonance is the test that more accurately define the drainage and guide us to choose the best surgical technique in each patient.