

An Expanded use of injectable pulmonic valve for Primary Repair

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Objective: Pulmonic valve insertion is needed for total correction of some type right ventricle outflow problems. Injectable pulmonic valve is designed for treatment of chronic pulmonic regurgitation in operated tetralogy of Fallot patients. We suggest that its advantages justify to expand its indication in primary correction of pathologies and we used this valve for primary repair in 3 patients.

Material and method: In 2 patients with pulmonary atresia and VSD and one patient with absent pulmonary valve syndrome injectable pulmonic valve was used in primary repair. Their ages were 18 months, 6 and 11 years respectively. The patients with pulmonary atresia had pulmonary branch arterioplasty with patch concomitantly. In the patient with absent pulmonary valve syndrome injectable valve was inserted after annular enlargement with pericardial patch. At the end of the procedure all 3 patients had 0,5 right ventricle to aortic pressure ratio with direct measurement.

Results: All patient had uneventfull postoperative period and discharged from hospital at 2 nd week postoperatively. At discharge repeat echocardiography demonstrated that pulmonic valve function was normal without any gradient at valvular level. They were followed for 24, 22 and 20 months and none of them had valve related problems during this period.

Conclusion: Injectable pulmonic valve is designed to have larger annular diameter than the actual pulmonary artery due to its expandable stent. In addition to that no react pulmonic valve has been proven to have advantages over other alternatives with its resistance to calcification, infection, degeneration and so, good longterm durability. We believe that using a biological valve instead of valved conduit can be good alternative to enlarge outflow tract liberally and to delay reoperation in the future.