

AP Target Symposium

AP Target Symposium 2 (I-APT2)

Dealing with the borderline Right Ventricle - Fontan vs One-and-a-Half Ventricle Repair vs Biventricular Repair: what are the criteria and how to get there –

Chair: Munetaka Masuda (Department of Cardiovascular Surgery, Yokohama City University Hospital, Japan)

Chair: Hiroyuki Yamagishi (Department of Pediatrics, Keio University School of Medicine, Japan)

Fri. Jul 7, 2017 4:15 PM - 5:45 PM ROOM 3 (Exhibition and Event Hall Room 3)

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[I-APT2-06] Late Cardiopulmonary Function after BVR, 1.5 VR, and Fontan Repair in Patients with Borderline Right Ventricle

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Long-term outcome of patients with the borderline right ventricle (RV) depends on the severity of abnormalities (size and function) of the tricuspid valve (TV) and RV. The final options of these patients mainly include Fontan operation, one-and a-half repair (1.5VR), and biventricular repair (BVR) and each of procedure may have significant effect on the long-term morbidity and mortality. Since 2006, we have evaluated cardiopulmonary function of patients with critical RV outflow tract obstruction with intact ventricular septum, consisting of 16 those after Fontan (24 ± 6 years), 4 after 1.5VR (24 ± 6 years), and 15 after BVR (24 ± 6 years). According to our data, peak oxygen uptake (VO_2) was highest in the BVR patients, while the lowest in 1.5VR patients ($p < 0.01$), and same trend of plasma levels of brain natriuretic peptide were observed ($p < 0.01$), indicating superior long-term outcome of BVR patients over the other two groups. In BVR patients, however, small RV volume was associated with low peak VO_2 ($p < 0.05$), implying some of BVR patients with borderline RV volume might have benefited from Fontan operation.