

JCK Oral

## JCK Oral 1 (II-JCKO1)

### Basic/New Insights

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

Chair:Yimin Hua(Department of Pediatric Cardiology, West China Second University Hosiptal, China)

Chair:Chung Il Noh(Department of Pediatrics, Seoul National University Hospital, Korea)

Sat. Jul 8, 2017 8:30 AM - 9:20 AM ROOM 3 (Exhibition and Event Hall Room 3)

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8:30 AM - 9:20 AM

### [II-JCKO1-01]The Failing Right Heart in Congenital Heart Disease: New Mechanistic Insights, Echocardiographic Modalities Assessment and Management Strategies

○Yiu Fai Cheung (Department of Paediatrics and Adolescent Medicine, LKS Faculty of Medicine, The University of Hong Kong, Hong Kong)

Normal functioning of the subpulmonary and systemic right ventricles is important in congenial heart patients. Recent studies have provided mechanistic insights on progressive failure of the right heart, which include possible roles of altered right ventricular molecular remodeling response, altered extracellular matrix composition, cardiac apoptosis, microRNA, and genetic polymorphisms. New echocardiographic techniques have allowed quantification beyond assessment of right ventricular volumes and ejection fraction and enabled direct interrogation of right atrial and ventricular deformation. The novel vector flow mapping may further allow bedside quantification of pulmonary regurgitation. Management of right ventricular dysfunction in the setting of congenital heart disease remains challenging. Conventional heart failure medications have been used with disappointing results. Possible beneficial effects of vasopressors have been shown in the management of acute right ventricular failure in decompensated patients. Cardiac resynchronization therapy has shown some promise although long-term data are lacking. The optimal timing of pulmonary valve replacement in patients with repaired tetralogy and the role of tricuspid valve repair in adult patients with a failing systemic right ventricle to ameliorate right ventricular volume load remains to be subjects of debate. Further understanding of pathogenesis of progressive right ventricular dysfunction is important for discovery of target-specific new therapies.