

JOINT EVENT

3rd International Conference on Cardiovascular Medicine and Cardiac Surgery
&
26th Annual Conference on Clinical & Medical Case Reports in Cardiology
July 05-06, 2018 | Berlin, Germany

Regulatory mechanisms and novel pharmacologic targets of ductus arteriosus**Jong-Hau Hsu**

Kaohsiung Medical University, Taiwan

The ductus arteriosus (DA) is an artery indispensable in fetal circulation. PDA is a major cause of morbidity and mortality in premature infants, whereas persistent PDA is life-saving in newborns with DA-dependent CHDs. Therefore, elucidating molecular mechanisms underlying regulation of DA patency is an important field of vascular biology and translational research of pediatric cardiology. DA closure is a complex process including two mechanisms: functional and anatomical closures. Functional closure is a transient response mediated mainly by vasoconstriction caused by abrupt increase of oxygen tension and postnatal withdrawal of vasodilatory PGE₂. Anatomical closure is a constitutive process of luminal obliteration characterized by intimal thickening, resulting in progressive DA vascular remodeling and permanent DA closure. Current clinical approach for management of DA patency is mainly targeted on the PGE/cAMP pathway. However, recent studies have shown that PGE can promote DA remodeling through EP4 receptor while maintaining DA vasodilation. Therefore, novel pharmacologic strategy regulating vaso-reactivity and remodeling would be helpful for management of functional and anatomic closure of DA. The purposes of this talk are to review the complex mechanisms regulating DA patency, and share our translational research of novel pharmacologic targets, including BNP, cGMP pathway and Notch signaling. An improved understanding of the mechanistic pathways regulating DA patency may yield novel or additional therapeutic strategies for patients with PDA and DA-dependent CHDs.

Biography

Jong-Hau Hsu M.D. is a professor of Pediatrics in Kaohsiung Medical University in Kaohsiung, Taiwan. He is also the director of pediatric cardiology and pediatric intensive care unit in Kaohsiung Medical University Hospital, and the vice director of school of medicine of Kaohsiung Medical University. As a pediatric cardiologist and intensivist, his current research interests focus on biomarker of pediatric intensive care and novel pharmacologic targets on regulation of pulmonary circulation and ductus arteriosus patency.

Notes: