

AP Target Symposium

AP Target Symposium 1 (I-APT1)

Dealing with the borderline Left Ventricle - What are the requirements for biventricular circulation, and how to get there?

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Fri. Jul 7, 2017 2:35 PM - 4:05 PM ROOM 3 (Exhibition and Event Hall Room 3)

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[I-APT1-01] The borderline left ventricle: circulation and morphology of fetus, neonate and infant

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The "borderline left ventricle" (BLV) is considered as a left ventricle with an indeterminate position between normal heart and hypoplastic left heart syndrome. The BLV usually occurs in association with aortic valve stenosis, aortic coarctation, hypoplastic aortic arch, mitral valve stenosis and endocardial fibroelastosis. Fetal echocardiographic studies have demonstrated the progressive development of hypoplasia of left heart structures related to left-sided obstructive lesions.

In the presence BLV, we hesitate about decision of the treatment strategy, biventricular repair or univentricular palliation. We cannot ignore the mortality of the early postoperative period and subsequent reoperation after forcible biventricular repair, whereas serious complications such as protein losing enteropathy may occur after univentricular repair.

The predictor to determine the treatment strategy has been studied such as morphologic predictor (size of the mitral valve, end diastolic volume of left ventricle, endocardial fibroelastosis, size of the aortic valve, etc.) and functional predictor (ejection fraction, end diastolic pressure, pulmonary artery pressure, direction of the blood flow in the ascending aorta and the patent ductus arteriosus). However, the essential predictor is still unknown.

In late years, staged left ventricular recruitment to achieve biventricular repair after single ventricle palliation is suggested, while fetal intervention for aortic valve stenosis is proposed for catch-up growth of left heart in utero.

Patient with BLV is still in the in the grey zone.