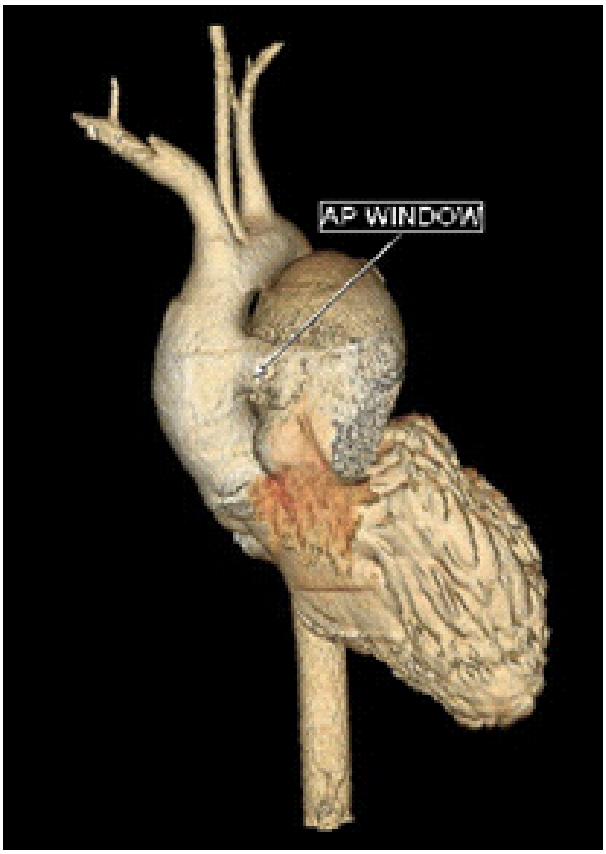
Cardiology Images

YOUNG BOY WITH SEVERE PULMONARY HYPERTENSION

Tahir Naveed[a*], Muhammad Ayub[a]

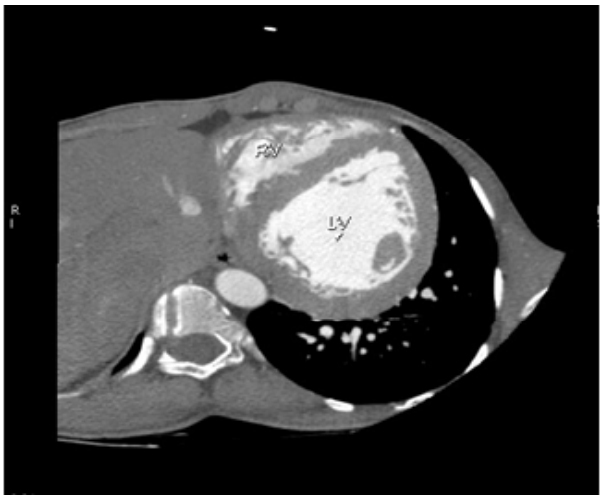
(J Cardiovasc Dis 2014;12(2):49-50)

Twenty-two years old boy presented with shortness of breath functional class II-III. On examination the precordium was pulsatile, he had wide pulse pressure and his first and second heart sounds were audible with loud pulmonary component of second heart sound. A systolic murmur was audible in the precordium. Transthoracic Echo showed dilated Left Ventricle (LV) with normal function and Aorto-Pulmonary Window (APW)was seen with left to right shunt on color Doppler. He had severe Tricuspid regurgitation (TR) with Tricuspid Valve Pressure Gradient TVPG (systolic) of 85 mmHg signifying severe pulmonary hypertension.

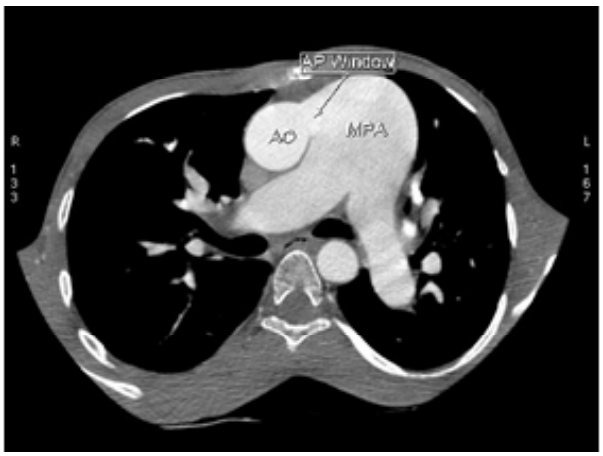


A

His 64 slice Multi Detector Computerized Tomography (MDCT) was done for confirmation of the shunt. The image A is Volume rendered (VR) showing communication between ascending aorta and dilated main pulmonary artery(MPA). The image B shows a short axis view of LV and Right Ventricle(RV) showing dilated LV and compressed RV. The Image C is an axial image at the level of



B



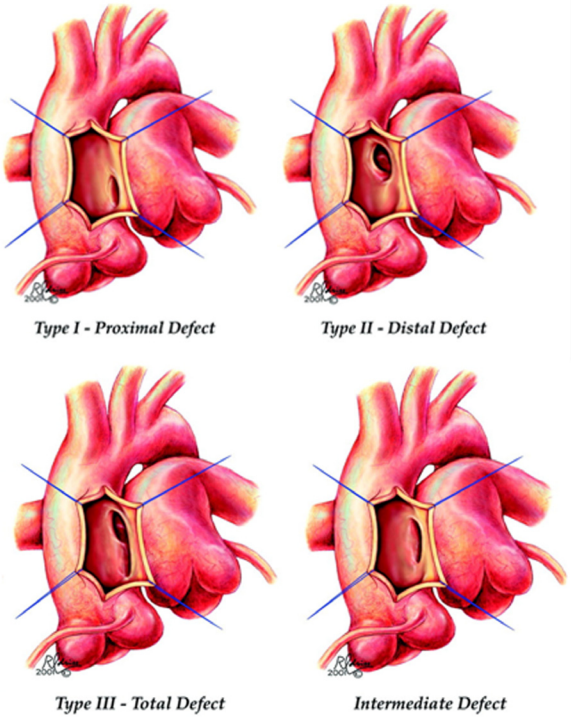
C

shunt showing communication between ascending aorta and MPA.MPA is markedly dilated.

APW is a defect between the great vessels that results from failure of the cono truncal ridges to

[a] Punjab Institute of Cardiology, Lahore-Pakistan
* Corresponding author:
Email: tahirnavid@gmail.com

Figure 1: Classification scheme recommended by the society of thoracic surgeons congenital heart surgery Database committee for aortopulmonary window



fuse. It is separate from truncus arteriosus in that it is associated with essentially normal aortic and pulmonary valves. The defect usually begins just above the sinuses of Valsalva and then extends a variable distance distally into the arch[1] (Fig 1)This defect is an important cause of severe pulmonary hypertension.

Imaging with Echocardiography, MDCT and MRI are suitable noninvasive techniques which can demonstrate the defect. MR images can reveal a left-to-right shunt and also may be useful for quantifying shunt volume[2].

REFERENCES

1.Backer CL, Mavroudis C. Surgical management of aortopulmonary window: a 40-year experience. Eur J Cardiothorac Surg. 2002 May;21(5):773-9.
2.Wang ZJ, Reddy GP, Gotway MB, Yeh BM, Higgins CB. Cardiovascular shunts: MR imaging evaluation. Radiographics. 2003;23 Spec No:S181-194.