

# A VERY RARE CASE - AORTO-LEFT VENTRICULAR TUNNEL

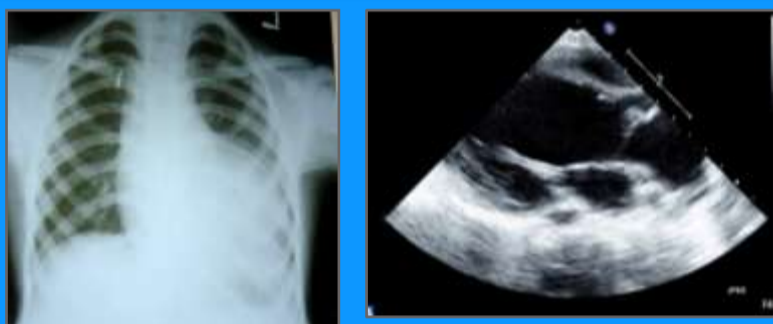
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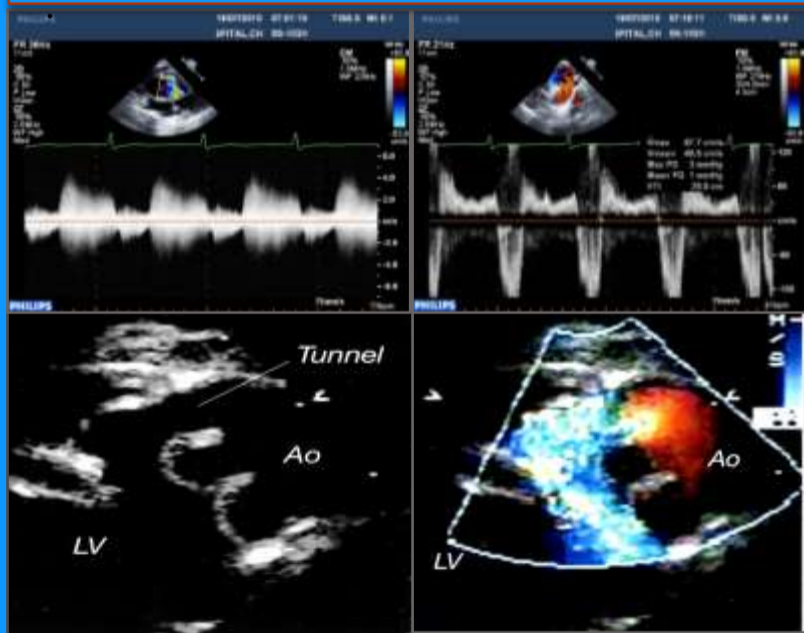
## HISTORY

An 6-year-male child was presented with recurrent URI .  
An easily discernible thrill associated with a 4/6 diastolic murmur was detected.



**Chest Xray- PA view** shows moderate cardiomegaly with the left ventricular apex extending to the left chest all.

**Echo** shows an ALVT arising immediately above the right sinus of Valsalva  
Long-axis view of the tunnel shows Diastolic regurgitation via the tunnel.



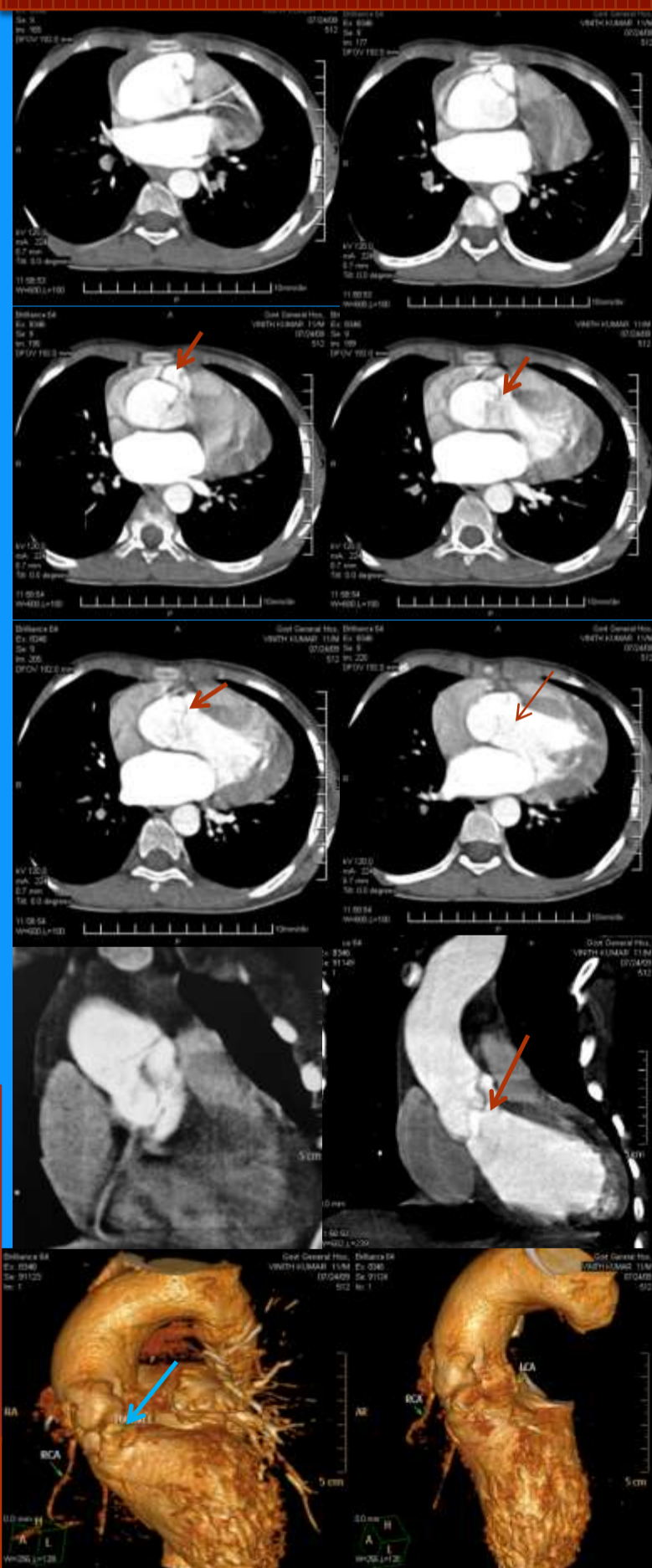
## FOLLOW UP:

He was operated by : gortex patch closure of proximal aortic opening & direct closure of distal LV side.



INTRA OP. DIAGNOSIS :  
AORTA LV TUNNEL TYPE II

CECT CORONARY ANGIOGRAPHY  
AXIAL,SAG&VR IMAGES SHOWS - a tunnel originating from the aorta just above the right coronary sinus and coursing posteriorly around the aorta and traversing thr' IVseptum and terminating into the superiormost part of left ventricle just below the aortic annulus & dilated LV.



CECT COR. ANGIOGRAPHY  
IMPRESSION :

- 1.AORTA LV TUNNEL TYPE II
- 2.DILATED LV.
- 3.NORMAL CORONARY ARTERIES

REFERENCES : J Am Coll Cardiol, 2004;  
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## DISCUSSION

Aorto-left ventricular tunnel is a rare congenital, extracardiac channel which connects the ascending aorta above the sinutubular junction to the cavity of the left ventricle.

INCIDENCE < 0.1% SEX - M:F=2:1

Associated defects, involving the prox.coronary arteries, or aortic or pulmonary valves, present in <50% cases.

## HOVAGUIMIAN ANATOMICAL CLASSIFICATION

- Type 1, a simple tunnel with a slit-like opening at the aortic end and no aortic valve distortion;  
Type 2, a large extracardiac aortic wall aneurysm of the tunnel with an opening at the aortic end, with or without valvular distortion;  
Type 3, intracardiac aneurysm of the septal portion of the tunnel, with or without right ventricular outflow tract obstruction; and  
Type 4, a combination of types 1 and 2

## DIAGNOSTIC WORKUP

- 1.Echocardiography is the initial diagnostic investigation of choice.
2. Coronary ct angiography provides excellent 3D anatomical view & helps surgical planning.
- 3.Magnetic resonance angiography also been used to demonstrate .
- 4.Cardiac catheterization with angiography done only when associated lesions or coronary arterial origins cannot be evaluated with certainty on noninvasive studies.

## Management -surgical correction of a tunnel

- 1.Transaortic patch closure of aortic end, & 2nd patch thr'tunnel itself to close the vent. orifice .
- 2.Direct suture (subsequent valve replacement)

## Conclusions.

- ALVT is a rare cardiac malformation with a good long-term outcome after surgery.
- Most patients present early in life with signs of AR / CHF and may have associated lesions.
- Long-term review for AR is essential.