

## Image in cardiology

## Congenitally corrected transposition of the great arteries, coronary anomaly and transplant



## Trasposición de grandes arterias congénitamente corregida, anomalía coronaria y trasplante

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Figure 1.

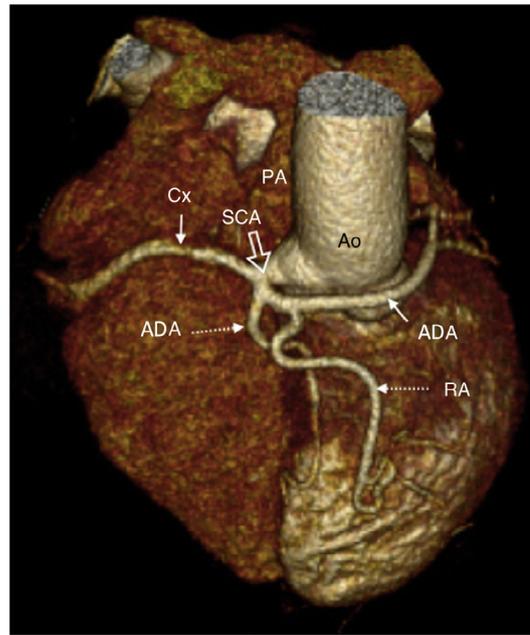


Figure 2.

On routine examination, a grade II/IV systolic murmur was detected in the fifth left intercostal space of a 55-year-old woman with no cardiovascular symptoms. A transthoracic echocardiogram showed congenitally corrected transposition of the great arteries (ccTGA) and tricuspid valve dysplasia with thick chordae tendineae, severe eccentric regurgitation, and systemic ventricular function of 39%. Computed tomography angiography confirmed ccTGA with parallel arrangement of the vessels, and anterior aorta (Ao) to the left of the pulmonary artery (PA) (figure 1A-C; LA, left atrium; LAA, left atrial appendage; LV, left ventricle; RA, right atrium; RV, right ventricle). A single coronary artery (SCA) could be observed emerging from the right anterior sinus of Valsalva, giving rise to the circumflex artery (Cx) and right coronary artery (RCA), from which a double system of anterior descending artery (ADA) originated (figure 2).

The combination of this double coronary anomaly is very rare, and only 2 cases have been reported. In patients with ccTGA referred for tricuspid valve replacement, postoperative survival at 10 years is less than 20% if the systemic ventricular ejection fraction is < 40%.

For patients with right heart failure and ccTGA, heart transplant is an option as, in the few cases reported, long-term outcomes in these recipients were comparable with other indications for transplant. Given the abnormal alignment of the great arteries, extraction of the donor heart would have to be modified. The transverse aortic arch and pulmonary artery would need to be completely dissected at their bifurcation to obtain an appropriate arrangement for reimplantation.

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