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Pitfalls in the Diagnosis of Great Vessels.

Masaki Yahata, Shota Saji,Yuki Tojo, Saki Yamamoto, Yoko Nishimura, Haruhiro Kondo, Seido Takae,Ritsuko Pooh , Nao Suzuki.
Department of Obstetrics and Gynecology, St. Marianna University School of Medicine, Kanagawa, Japan

Introduction

In normal fetal echography, the great vessel that is not bifurcated from the left ventricle indicates the aorta, and the great vessel bifurcated from the right ventricle indicates the pulmonary artery, which cross over each other. We've experienced rare case that don't fall into that.

Case

A 31-year-old patient was suspected fetal cardiac malformation made at screening ultrasound at 20 weeks' gestation

Diagnosis

The great vessel exiting the ventricle located on the right-sided was not bifurcated, while those exiting the other ventricle was bifurcated. The two great vessels did not appear to cross over, and the unbranched great vessel was the largest of the three in the three-vessel view. The four-chamber view showed atrioventricular mismatch, and ccTGA was also mentioned as a differential. However, the diagnosis of transposition of the great vessels (TGA) was made because of morphological findings of the great vessels.

Infant Information

A 2986g female infant was born by vacuum delivery at 39 weeks'. The postnatal diagnosis was corrected TGA and Anomalous origin of the right pulmonary artery from ascending aorta (AORPA). Other findings included aortic coarctation.

Consideration

There were pitfalls in the diagnosis of this case. That is, we misidentified the aorta and the pulmonary artery. The bifurcating great vessel was not pulmonary artery but aorta with AORPA .However, this bifurcated vessel was actually an Aorta with AORPA, not a pulmonary artery. Unfortunately, the presence of Coarctation made the aorta appear narrower, which also contributed to making the diagnosis more difficult.

Conclusion

It is not always correct to assume that a bifurcating great vessel is the pulmonary artery and a non-bifurcating great vessel is the aorta; it is important to differentiate TGA from ccTGA by also evaluating ventricular morphology.

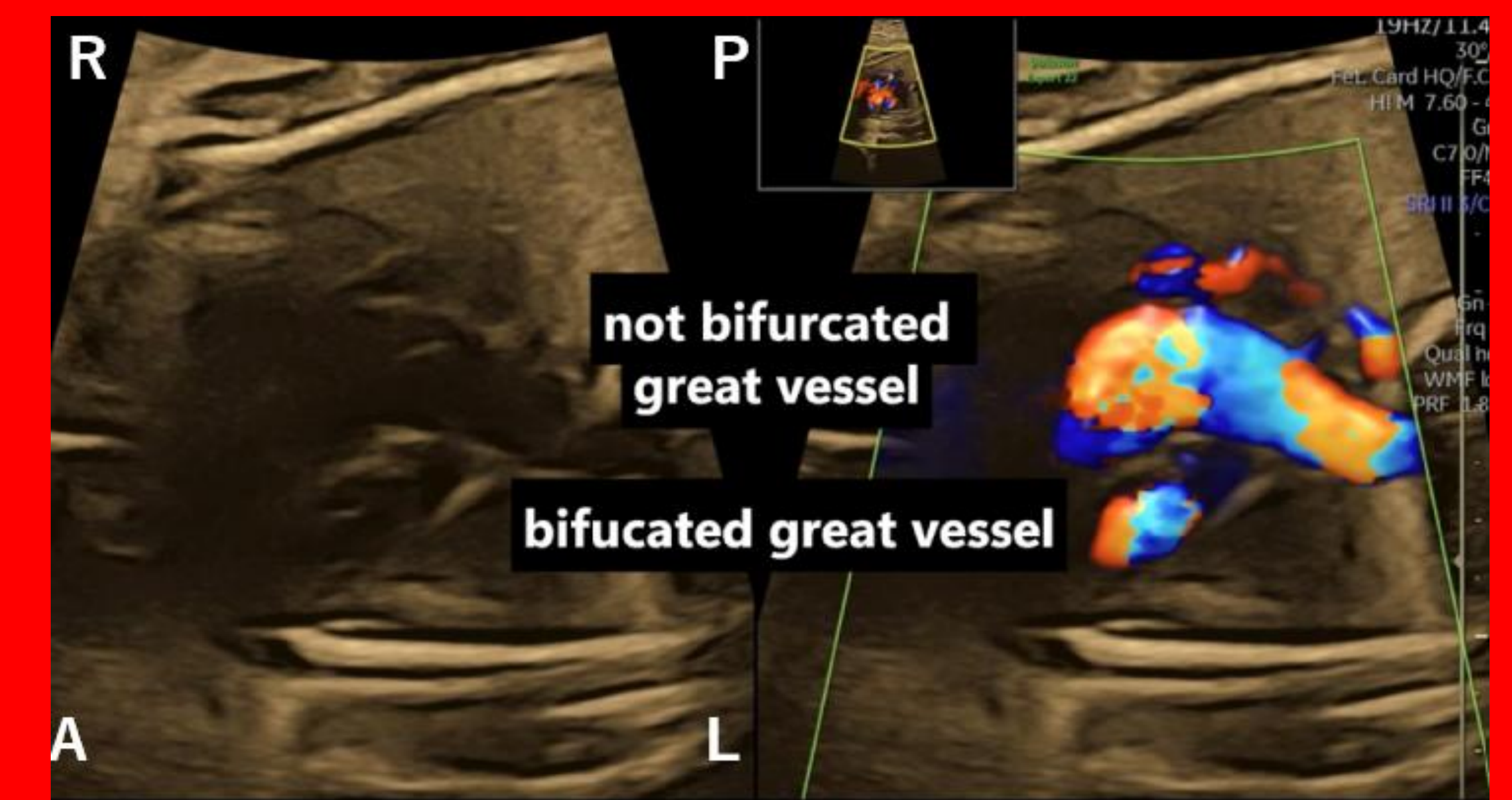


Figure 1. Outflow-tract views ~ 3 Vessel Views

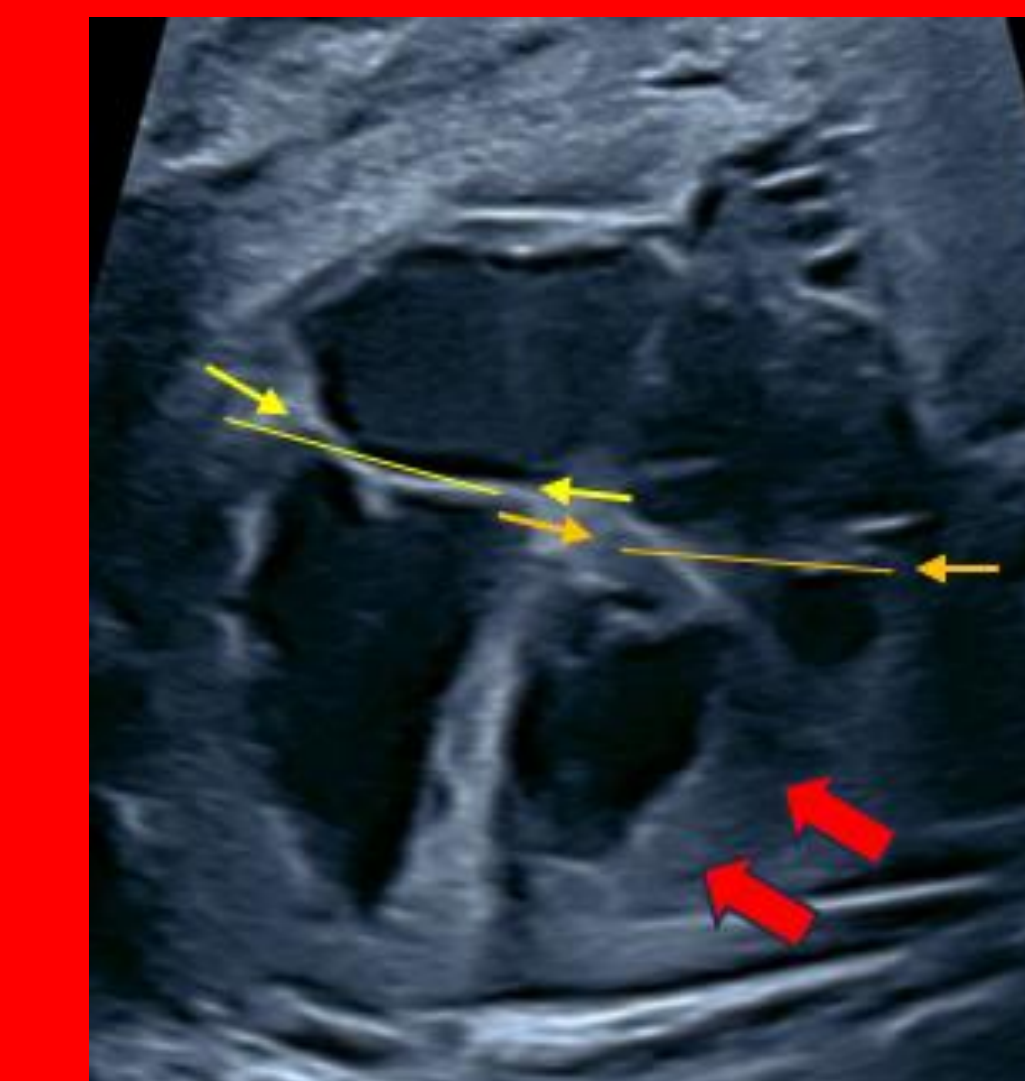


Figure 2. Atrioventricular discordance was observed in the four-chamber view

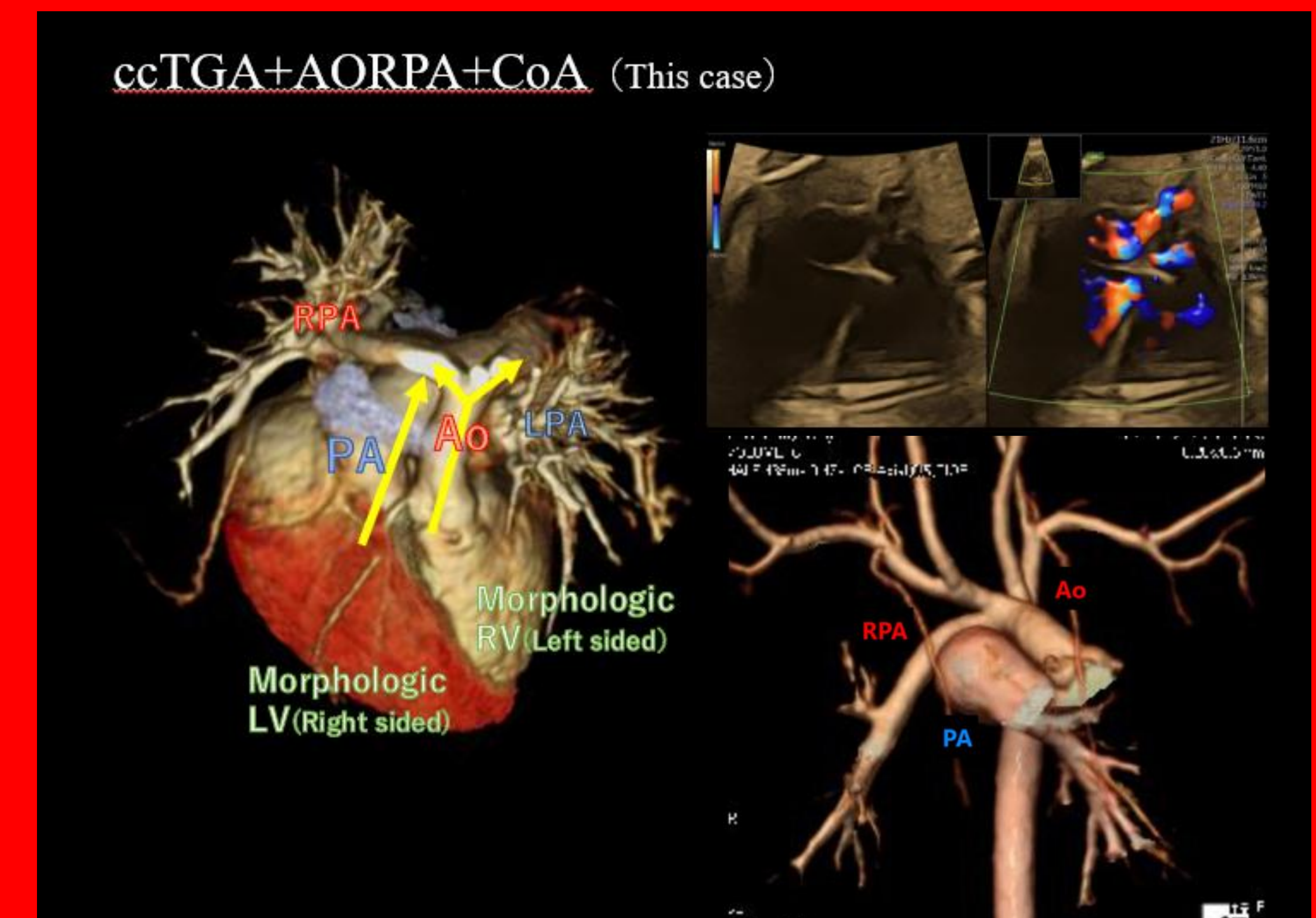


Figure 3. The cardiac structure in this case