Image in cardiology

Isolation of the right subclavian artery. Mini-invasive repair

Aislamiento de la arteria subclavia derecha: reparación miniinvasiva

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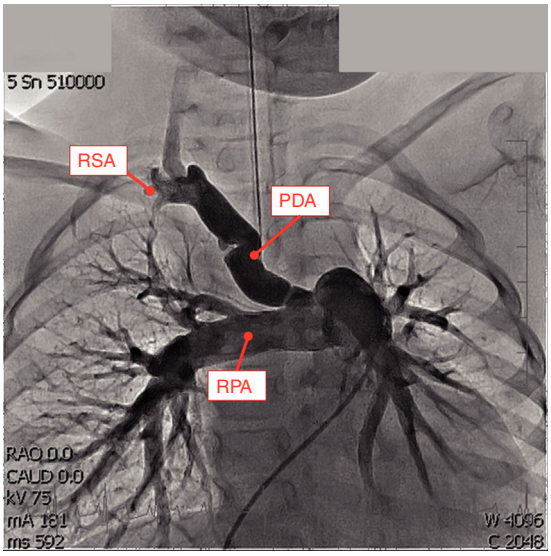

Figure 1.

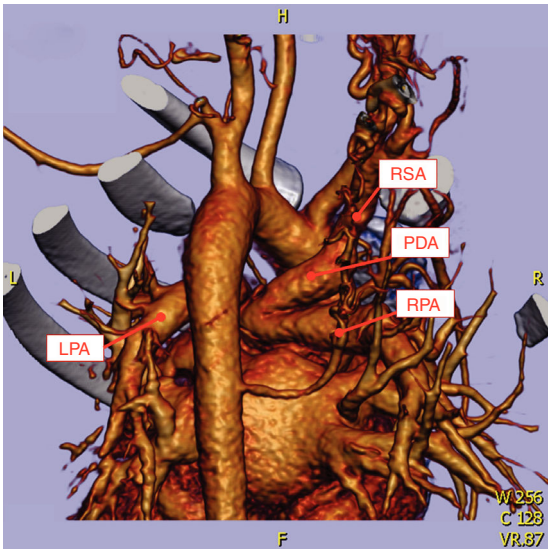

Figure 2.

Isolation of the right subclavian artery (RSA) is a rare aortic arch anomaly, defined as a loss of continuity between the subclavian artery and the aorta with persistent connection to the homolateral pulmonary artery (PA) through a patent or nonpatent arterial duct. Its presence as an isolated anomaly is extremely rare. It is usually combined with complex cardiac malformations. We report right subclavian artery isolation in a child with normal left-sided aortic arch presenting as a single anomaly. A 4-year-old girl was referred with a diagnosis of patent ductus arteriosus (PDA). On physical examination, a continuous murmur was observed. Arterial pulses on the right upper arm were weak compared with the left arm. Echocardiography revealed an RSA arising from the right pulmonary artery (RPA) via a 9-mm wide PDA with a left-to-right shunt to the RPA. During cardiac catheterization, the mean PA pressure was slightly increased to 20 mmHg and a left-to-right shunt of 47% was calculated (Figure 1). Computed tomography angiography was performed for 3-dimensional imaging (Figure 2, left pulmonary artery [LPA]). The patient underwent a division and reimplantation of the RSA to the ascending aorta via an upper partial sternotomy and limited skin incision. The procedure is shown in Video 1 of the supplementary data. The surgical reimplantation approach can avoid subclavian steal in the future and the possibility of neurological syncope and suboptimal upper limb growth. Although some cases of subclavian artery isolation might be associated with Di George syndrome, our patient did not have the typical phenotype and normal thymus was seen during the operation. Consequently, genetic testing was not performed.

APPENDIX. SUPPLEMENTARY DATA

Supplementary data associated with this article can be found in the online version, at https://doi.org/10.1016/j.rec.2018.11.007.

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