

Anomalous Origin of the Left Coronary Artery from the Right Pulmonary Artery

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A 2-month-old boy presented to the former emergency department with a fever of 38 ° C and hypoxemia and respiratory failure. He was transferred to our hospital on suspicion of myocarditis because he had an enlarged chest X-ray, a 30% EF, a decrease in left heart function, and an increase in myocardial deviation enzyme(CK-MB 149.8 IU/L, TnT-1(+)). Echocardiography revealed dilation and poor contraction of left ventricle and no abnormalities in the origin of the coronary arteries (Figure1A, B), and treatment with cardiac stimulants, antibiotics, and IVIG was started for myocarditis. After that, his cardiac function did not improve, and contrast-enhanced CT was taken on day 12. He was diagnosed with anomalous origin of the left coronary artery from the pulmonary artery (ALCAPA). The LCA diverged from the right PA instead of the main PA (Figure1C). Coronary transplantation was performed on day 13. The postoperative course was uneventful, and he was transferred to our hospital on the 21st day after the operation.

ALCAPA mostly originates from the left posterior sinus at the root of the PA, which can lead to coronary steal syndrome and myocardial ischemia, and the incidence of the disease is approximately 1/3,00,000, accounting for 0.25% to 0.5% of congenital heart disease(1, 2). In this case, the LCA diverged from the right PA instead of the main PA, which is extremely rare and has never been reported before. This difference in bifurcation might make the diagnosis of ALCAPA on echocardiography more difficult.

ALCAPA should be considered in the differential diagnosis of myocarditis, and contrast-enhanced CT or catheterization should be considered even if coronary artery abnormalities are not detected on echocardiography.

References

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Consent statement

Written informed consent was obtained from parents to publish this report in accordance with the journal's patient consent policy.

Disclosure

The authors declare no conflict of interest.

