Anomalous origin of the left coronary artery from the pulmonary artery (ALCAPA) in a newborn

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A 5-day-old child was referred to the department of cardiology for bradycardia without any other cardiac symptoms. ECG was normal. Cardiac echography demonstrated a reverse flow inside the interventricular branch of the left coronary artery suggesting ALCAPA. ECG-gated multidetector CT angiography, with oblique axial view (a) and 3-D volume-rendered images (b), confirmed the diagnosis of ALCAPA (DLP=99 mGy-cm) (Fig. 1). Reimplantation of the left coronary artery into the aorta was performed promptly and with success.

ALCAPA is a rare congenital anomaly but is one of the most common causes of myocardial ischemia in children [1]. Usually, symptoms occur around 8 weeks of life. If untreated, most patients will die within the first year of life. Cardiac echography alone permits the diagnosis of ALCAPA. Nevertheless, ECG-gated multidetector CT angiography can be used instead of conventional angiography to clarify the anatomy or confirm an unclear diagnosis [2]. In neonates, early surgical correction allows improvement of ventricular function.

Fig. 1 CT images

References

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