A Rare Anatomic Variant: Interrupted and Right-Sided Aortic Arch With Bilateral Ductus Arteriosi

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A newborn girl presented with tachypnea and cyanosis in the lower and right upper extremities 2 days after birth and received a diagnosis of pulmonary high-flow shock. An initial echocardiogram showed coarctation of the aorta, ductus arteriosus, secundum atrial septal defect, and an intact ventricular septum. Intravenous prostaglandin E1 was initially administered. Enhanced helical computed tomography (Fig 1) revealed a right-sided and interrupted aortic arch (type B). The ascending aorta proceeded as the left brachiocephalic artery and the right common carotid artery. Patent ductus arteriosi were present at the left brachiocephalic artery that coalesced with the left pulmonary artery and at the main pulmonary artery that coalesced with a right-sided descending thoracic aorta. The right subclavian artery arose immediately distal to the patent ductus arteriosus on the right. Emergent total repair was performed (Fig 2). Patent ductus arteriosus on the left was ligated and transected. The posterior wall of the ascending aorta was incised, and patent ductus arteriosus on the right was transected immediately proximal to the right subclavian artery. The descending thoracic aorta was anastomosed to the ascending aorta in an end-to-side fashion.

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