

Transcatheter Closure of Residual Aortopulmonary Window With Amplatzer Duct Occluder II in an Infant

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ABSTRACT: An 11-month-old boy with a postsurgical residual aortopulmonary window underwent transcatheter closure with Amplatzer Duct Occluder II 3/4.

VASCULAR DISEASE MANAGEMENT 2018;15(2):E12-E13.

Key words: ADO II transcatheter, aortopulmonary, occluder

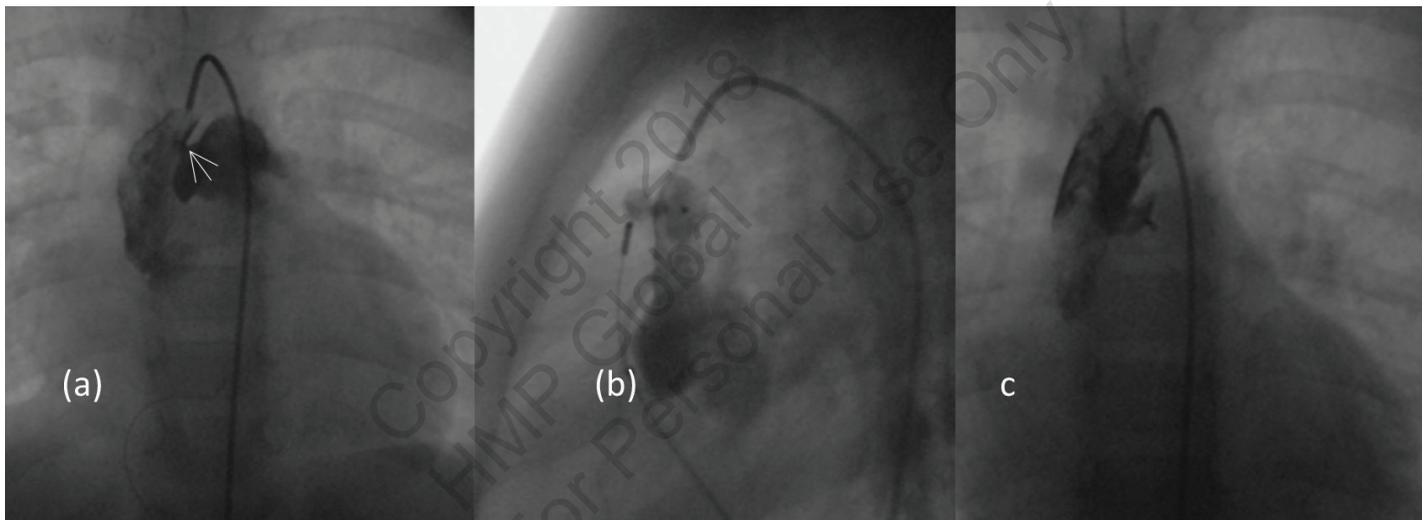


Figure 1. Arteriography of the ascending thoracic aorta (A) before closure of the defect (arrow), after closure but before detachment (B), for checking adequate distance of the device from right coronary, and (C) after device release.

An 11-month-old boy weighing 9.8 kg was admitted to our department with a postsurgical residual aortopulmonary window. The proximal type I, large aortopulmonary defect was surgically repaired at neonatal age because of heart failure. A restrictive residual shunt was revealed upon echocardiogram immediately after the operation. The asymptomatic boy with a IV/VI degree continuous murmur was admitted for a scheduled transcatheter closure of the defect. Distance of the defect from the pulmonary and aortic cusps and coronary orifices was adequate for device implantation.

Antimicrobial treatment with cefazolin 50 mg/kg for 24 hours and gentamycin 6 mg/kg for 24 hours was delivered 12 hours prior to the procedure until 24 hours following the procedure.

The boy received general anesthesia, and the right femoral artery and vein were percutaneously cannulated. Heparin (50 units/kg)

was administered after vascular access was obtained. Ascending aortography demonstrated an aortopulmonary window that was 2 mm in diameter and 2.8 mm in length.

The defect was accessed from the femoral vein, via the pulmonary artery, using a 4Fr Cobra catheter and 0.035" straight, 160 cm long guidewire. The wire was stabilized in the right subclavian artery. Over the wire, a 4Fr Amplatzer Patent Duct delivery system was advanced through the aortopulmonary defect into the ascending aorta. A 3/4 Amplatzer Duct Occluder II was introduced and deployed. Total fluoroscopy time was 12 minutes.

The boy was discharged one day after implantation. Aspirin 5 mg/kg/day and chemoprophylaxis for bacterial endocarditis was suggested for 1 year after the procedure. The patient was followed up for 11 months after the procedure and was asymptomatic. The device was smoothly accommodated both in the ascending aorta



Figure 2. Pulmonary arteriography after closure and detachment of the device.

and pulmonary trunk, with no residual shunt. The distance from the coronary orifice was adequate, and resting electrocardiogram

results were normal.

In selected infants,^{1,2} catheter closure of aortopulmonary windows with a device^{3,4} may be feasible. ■

Disclosure: The authors have completed and returned the ICMJE Form for Disclosure of Potential Conflicts of Interest. The authors report no conflicts of interest regarding the content herein.

Manuscript submitted October 29, 2017; accepted January 22, 2018.

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