Patent ductus arteriosus demonstrated in an adult patient using cardiovascular magnetic resonance imaging

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Figure 1) Maximum-intensity projection image of a contrast-enhanced magnetic resonance angiogram demonstrating the aorta (Ao) and left pulmonary artery (LPA) connected by a patent ductus arteriosus (PDA) measuring 2 cm in length and 4 mm in diameter

A 52-year-old pilot presented for cardiovascular magnetic resonance imaging evaluation of a suspected patent ductus arteriosus (PDA) seen on an echocardiogram that was obtained for renewal of his license. Figure 1 is a maximum-intensity projection image of a contrast-enhanced magnetic resonance angiogram demonstrating the aorta and left pulmonary artery connected by a PDA measuring 2 cm in length and 4 mm in diameter. Figure 2 shows an in-plane phase contrast image demonstrating the retrograde flow jet from the aorta, through the PDA into the pulmonary artery. The calculated flow through the PDA was 3 mL/beat with a systemic to pulmonary blood flow ratio of 1.06. The accompanying

Figure 2) In-plane phase contrast image demonstrating the retrograde flow jet from the aorta (arrowheads), through the patent ductus arteriosus into the pulmonary artery. AAo Ascending aorta; DAo Descending aorta; LPA Left pulmonary artery (arrow); MPA Main pulmonary artery

video (available at www.pulsus.com) demonstrates the continuous jet of retrograde flow from the PDA into the pulmonary artery. The remainder of the study was normal, and the patient was referred for consideration of percutaneous closure of the PDA.

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