Anomalous Origin of the Left Main Coronary Artery From the Main Pulmonary Artery in a Young Adult

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A 23-year-old man who had had cardiac murmurs since childhood experienced heart arrest during exercise. Cardiac resuscitation and cardioversion of ventricular fibrillation rescued the patient. Subsequent work-up showed that the patient’s left coronary artery arose from the main pulmonary artery. Transesophageal echocardiography showed aneurysmal dilatation of the left coronary artery, which arose from the posterior aspect of the main pulmonary artery (Figures 1–3). Under hypothermic cardiopulmonary bypass and cardioplegic arrest, the cuff of the left coronary artery orifice was excised and reimplanted into the ascending aorta. The patient was discharged 6 days after the operation.

Figure 1. Multiplane transesophageal echocardiography of the ascending aorta and the main pulmonary artery (short-axis view). The left main coronary artery (LM) with aneurysmal transformation arose from the posterior aspect of the main pulmonary artery (MPA). The orifice of the left coronary artery can be clearly seen (arrow).

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Circulation encourages readers to submit cardiovascular images to the Circulation Editorial Office, St Luke’s Episcopal Hospital/Texas Heart Institute, 6720 Bertner Ave, MCI-267, Houston, TX 77030. (Circulation. 2001;104:1575-1576.)

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Figure 2. Multiplane transesophageal echocardiography of ascending aorta and main pulmonary artery (short-axis view). The enlarged right coronary artery with 2 orifices (small arrows) and the orifices of the left coronary artery (large arrow) are shown.

Figure 3. Multiplane (20°) transesophageal echocardiography of the ascending aorta and the main pulmonary artery. Turbulent flow from the main pulmonary artery through the orifice to the left coronary artery is evident.
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_Circulation_. 2001;104:1575-1576
doi: 10.1161/hc3801.095695

_Circulation_ is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
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Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the World Wide Web at:
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