

# Intercoronary connections between the right coronary artery and left anterior descending coronary artery

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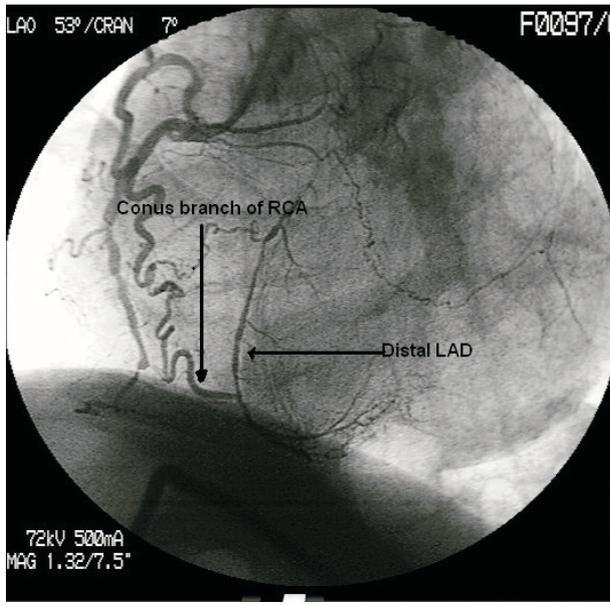
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Dear Editor,

Coronary collateral circulation is an important pathophysiological mechanism to supply blood to a myocardial area jeopardised by an occluded or stenotic artery (1). Natural bypass of coronary arteries is defined as anastomotic connections without an intervening capillary bed between portions of the same coronary artery or between different coronary arteries (2). This anatomic form of collateral circulation is more efficient than more common through a system of small arteries from the distal parts of the vessels (2). It is a very rare coronary artery anomaly with a prevalence of 2-3/100,000 (3). Intercoronary arterial connections are thought to be congenital in origin. It is suggested that faulty embryological development allows the existing intercoronary channel to remain prominent and maintain a large calibre. The functional significance of this large anastomotic connection between normal coronary arteries is unclear but one may speculate that they have a potential role in protecting the myocardium should significant atherosclerosis develop in either of the parent arteries [4]. Coronary angiography is the standard method to identify coronary collateral arteries. We presented an interesting case with collateral artery connections may serve as a natural bypass between the conus branch of right coronary artery and distal left anterior descending coronary artery. A 67-year-old male presented with stable angina pectoris. Physical examination and laboratory measurements were all normal. The ECG showed pathologic Q waves in leads DII, DIII and aVF. Coronary angiography was performed with the Seldinger technique. Four standard images (left anterior oblique cranial, anteroposterior cranial, right anterior oblique cranial, and caudal) for the left coronary system and two images (left and right anterior oblique projection) for the right coronary artery were obtained and saved in digital memory. Coronary angiography revealed severe 3-vessel coronary artery disease. Selective injection of the right coronary artery showed retrograde filling of the left anterior descending coronary artery. Collateral artery connections may serve as a natural bypass (Figure1).

**Keywords:** Collateral circulation, Natural Bypass



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