

Image in cardiology

Super Dominant Left Anterior Descending Coronary Artery



Arteria coronaria descendente anterior superdominante

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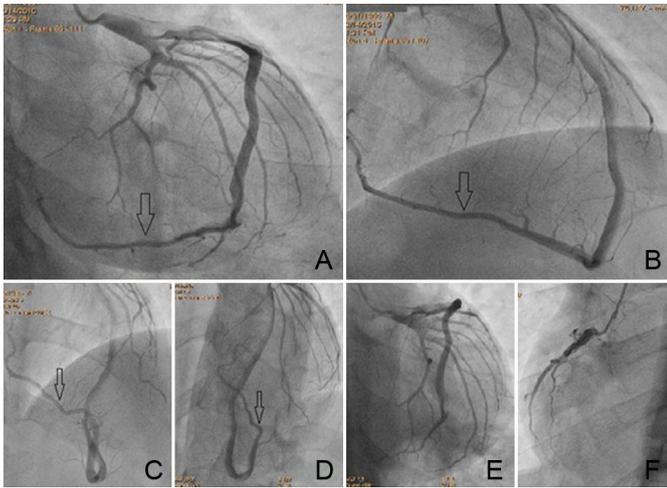


Figure 1.

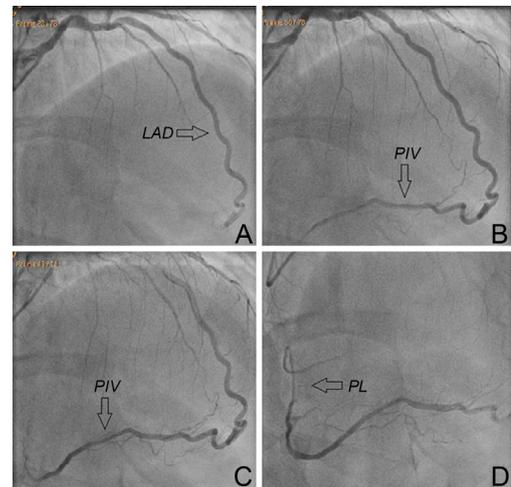


Figure 2.

The posterior descending artery or posterior interventricular (PIV) artery originates from the right coronary artery (RCA) in 85% of individuals, and from the circumflex artery (LCX) in 10% to 15%. The origin of the PIV, and of at least 1 posterolateral (PL) artery, determines the coronary dominance pattern, which is relevant in the prognosis of patients with coronary disease. We present 2 cases with a diagnosis of chronic stable exertional angina of Canadian Cardiovascular Society class III, who were referred for coronary angiography. In the first patient, angiography showed no significant lesions, and a left anterior descending artery (LAD) that reached the apex and continued ascending in the posterior interventricular groove until the crux cordis, with the PIV originating at the apex (Figure 1A, Figure 1B, Figure 1C, Figure 1D, arrows). The circumflex artery gave rise to 4 PL branches (Figure 1E), and the RCA, which was of small caliber and underdeveloped, terminated at the acute margin on the heart (Figure 1F). In the second patient, the LAD was a tortuous vessel that bordered the apex and gave rise to the PIV, which ascended along the homonymous groove until the crux cordis, where it continued as a PL branch (Figure 2A, Figure 2B, Figure 2C, Figure 2D, arterial flow sequence). The RCA was of small caliber. In such cases, the LAD takes on greater anatomical and functional importance, not just because of the large territory it supplies (which implies catastrophic clinical consequences if the vessel is acutely occluded), but also because of its length and spatial distribution, which could affect normal coronary perfusion. In both patients, medical treatment was optimized by increasing the dose of beta blockers and statins, which achieved clinical improvement.

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