

CASE REPORT

Break into left anterior descending coronary artery suggest myocardial bridging

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Summary. A 67 year-old woman presented with stable effort angina. A resting electrocardiogram was inconclusive. High-dose dipyridamole contrast-echocardiography shows normal left ventricular wall motion after 0.84 mg/kg/6 min dipyridamole. At rest a turbulent flow demonstrable by color aliasing, appeared in the territory of the left anterior descending coronary artery (LAD) during the diastolic phase.(www.actabiomedica.it)

Key words: myocardial bridging, milking sign, contrast echocardiography, left anterior descending coronary artery, computed tomography angiography

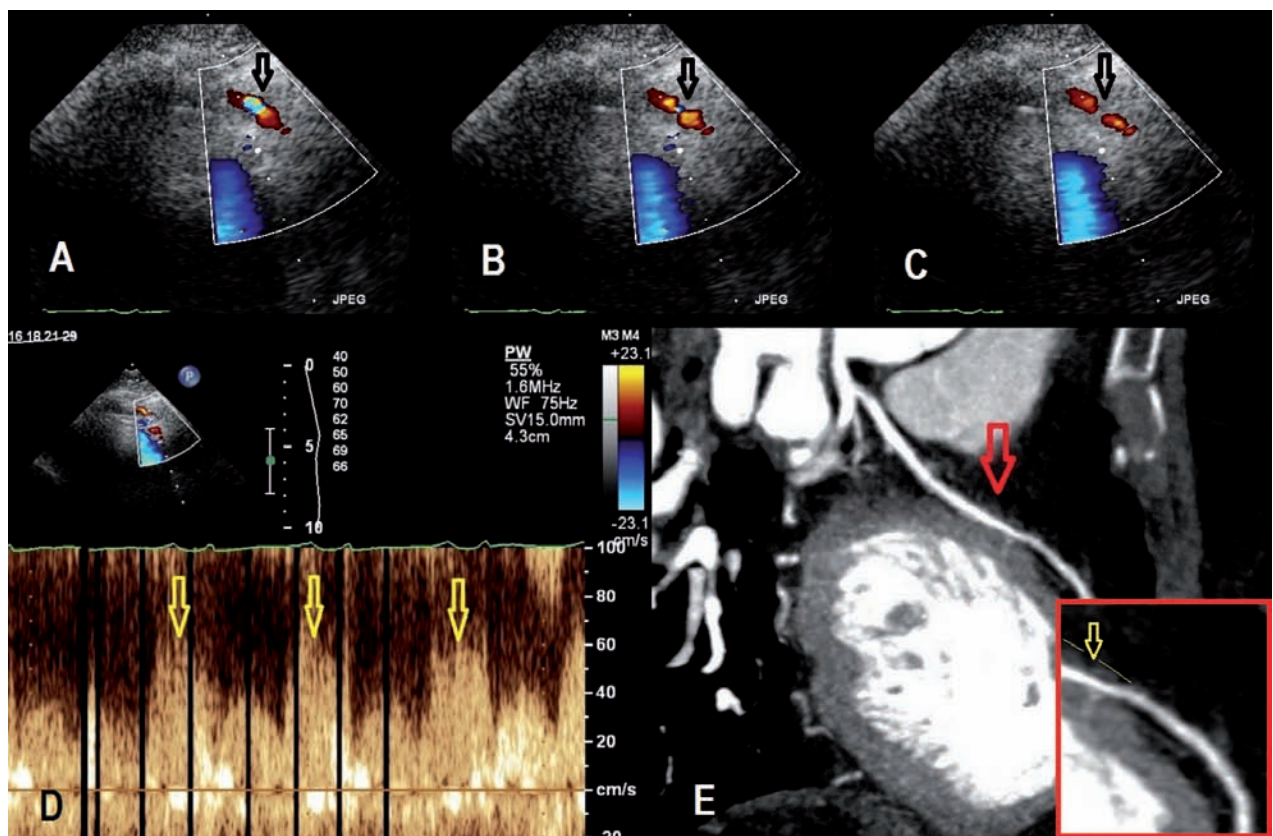


Figure 1.

A 67 year-old woman presented with stable effort angina. A resting electrocardiogram was inconclusive. High-dose dipyridamole contrast-echocardiography shows normal left ventricular wall motion after 0.84mg/kg/6min dipyridamole. At rest a turbulent flow demonstrable by color aliasing, appeared in the territory of the left anterior descending coronary artery (LAD) during the diastolic phase (modified parasternal long axes view-Figure 1A). The diameter reduction of this turbulent flow during systole, like the "milking" sign described at angiography, was detected (Figure 1B and 1C). Pulsed-wave Doppler confirmed the higher than usual peak diastolic velocity (Figure 1D) of the coronary flow for a resting condition. Rest diastolic velocities higher than 45 cm/sec are usually suspected for either coronary stenosis or an intramyocardial course. Ultimately the superficial intramyocardial course/bridging of LAD was detected at multislice computed tomography angiogram (Figure 1E).

Contrast-facilitated color Doppler echocardiography is a noninvasive, practical and radiation-free

technique that improves diagnostic detection of myocardial bridging or intramyocardial course of the LAD through enhanced color-Doppler signal and characteristic Doppler tracings, either demonstrating the so called "fingertip" phenomenon or, as in this case, higher velocities than usual (<45cm/sec) at rest.

When the suspect coronary intramyocardial course is superficial and those pathognomonic color-Doppler signs are identified at contrast-echocardiography, the diagnosis can then be easily confirmed using non-invasive multislice computed tomography coronary angiography, without the need of further invasive techniques, such as coronary angiography.

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