A 78-year-old man with a history of smoking, hypertension, and peripheral vascular disease presented with prolonged chest pain during the previous 48 hours. On admission, he was still symptomatic and the ECG showed Q waves and 2-mm ST elevation in leads II, III, and aVF, with a 2-mm persistent ST depression in leads C₂ to C₅ (Figure 1). Serial cardiac enzymes were positive for myocardial necrosis. Cardiac catheterization showed an isolated right proximal coronary occlusion. Angioplasty and stenting over the lesion were performed, with an excellent angiography result. Eight hours later, the patient presented symptoms and clinical findings of pericarditis, and in the next few hours, heart failure. Hemodynamic monitorization was performed, demonstrating left and right heart failure with low cardiac index.

Subsequently, a transthoracic echocardiogram revealed a posterior-inferior left ventricle true aneurysm with a pseudoaneurysm (Movie I), and color Doppler flow imaging showed a continuous flow crossing the wall orifice between the aneurysm and pseudoaneurysm (Figure 2; Movie II). A new angiography with ventriculogram confirmed the diagnosis (Figure 3; Movie III), adding the imaging of a posterior descending coronary artery constriction during the systole (Figure 4; Movie IV). This milking-like effect was attributed to compression of the artery during systolic ventricular pseudoaneurysm filling.

The patient rejected surgery and was successfully treated with pharmacological therapy. He remained alive in NYHA functional class II 2 years after discharge from our hospital.

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The online-only Data Supplement, which contains Movies I through IV, is available with this article at http://circ.ahajournals.org/cgi/content/full/111/25/e453/DC1.

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Figure 2. Color Doppler flow imaging showing a continuous flow crossing the wall orifice between the aneurysm and pseudoaneurysm.

Figure 3. A right anterior oblique ventriculogram showing the left ventricle (LV) with a true aneurysm (TA) and a ruptured wall producing a false aneurysm (FA).

Figure 4. The same projection as in Figure 3 shows a milking-like effect over the posterior descending coronary artery (PD) of the right coronary artery (RCA) coincident with the systolic filling of the false aneurysm.
Posterior Descending Artery Milking-Like Effect Caused by Ventricle Pseudoaneurysm Compression
Julio Ferrer-Hita, Ignacio D. Tuesta, Juan Lacalzada, Antonio Lara, Ignacio Laynez, Francisco Bosa and Francisco Marrero

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