Letters

TO THE EDITOR

Organized Thrombus Mimicking Spontaneous Coronary Artery Dissection

We read with great interest the case by Sengottuvelu and Rajendran (1), published in the *Journal* regarding vascular scaffolds for spontaneous coronary artery dissection (SCAD). A SCAD is an uncommon cause of acute myocardial infarction and has an incidence of 0.1% to 1.1% of all acute coronary syndromes (2,3). In addition to the rarity of this condition, SCAD is also underdiagnosed or misdiagnosed because of the low spatial resolution of angiography along with the lack of physician familiarity with its angiographic variants. The main angiographic findings of SCAD proposed by Saw (2) are: 1) (type I) contrast dye staining of the arterial wall with multiple radiolucent lumen—the pathognomonic angiographic appearance of SCAD; 2) (type II) an abrupt change in arterial caliber, with demarcation from normal diameter to diffuse narrowing; and 3) (type III) in which SCAD mimics atherosclerosis. The prevalence is higher in young women <50 years of age and, in general, with no visible angiographic atherosclerosis. Optical coherence tomography (OCT) findings have been reported as visualization of an intimomedial membrane with a double-lumen or crescent-shaped intramural hematoma (3) with or without intimal tear. Thus, we respectfully disagree with the authors (1) by describing the patient's angiography as suggestive of SCAD. The angiography does suggest a diffuse, filiform, and large burden of intraluminal thrombus alone, substantially diminished with days of antithrombotic drugs. Of note, the presence of such an amount of thrombus is infrequent in SCAD, even in ST-segment elevation myocardial infarction patients. Indeed, myocardial ischemia during SCAD is triggered by pressure-driven expansion of the lumen inducing axial propagation of the dissection and true lumen compression, not related to a thrombotic event. Finally, the OCT findings documented by the authors (1) depict well-organized thrombus, with multiples channels at some point, with a focal intimal flap; the presence of a typical aforementioned OCT signature in patients with SCAD (i.e., intimomedial membrane with a double-lumen or intramural hematoma) is also lacking in this case. OCT video, either at baseline or post-scaffold implantation (because it may also show residual abluminal hematomas behind the struts in SCAD), will be helpful for the readers to differentiate an actual SCAD from a simple atherothrombotic phenomenon.

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REPLY: Organized Thrombus Mimicking Spontaneous Coronary Artery Dissection

We read the letter from Dr. Cade and colleagues in response to our paper (1) with great interest and would like to share our views. Optical coherence tomography (OCT) with very high resolution can be considered the gold standard (2) to diagnose coronary artery dissection, but in a given case it may be limited by the residual blood, shadowing, or insufficient penetration and intravascular ultrasound may be complementary (3). Demonstration of an intimomedial membrane with double lumen appearance or an intramural hematoma with or without an entry point on OCT is important for diagnosis of spontaneous coronary artery dissection (4). In the case we presented, our angiographic diagnosis was diffuse