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DOI: 10.1016/j.jcin.2016.10.007
PMID: 28040441
Recurrent Vasospastic Myocardial Infarctions and Hand Necrosis

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A 30-year-old male smoker presented to the emergency department with anterior ST-segment elevation myocardial infarction. Primary percutaneous coronary intervention performed via the right radial artery showed an ostial thrombotic subocclusion of the left anterior descending artery (Figure 1A, black arrow) successfully treated with 2 drug-eluting stents under abciximab perfusion.

Two days later, the patient developed an inferior ST-segment elevation myocardial infarction and the repeated percutaneous coronary intervention via the same vascular access revealed a subocclusion of the previously normal mid-right coronary artery (Figure 1B, black arrow). Intravascular optical coherence tomography confirmed the angiographic suspicion of focal vasospasm (Figure 1C), showing a concentric narrowing without atherosclerosis, dissection, or thrombus. After ineffective intracoronary nitroglycerin and verapamil injection, balloon angioplasty without stenting permitted the resolution of spasm and the alleviation of symptoms. Although drug tests were negative, the patient admitted occasional consumption of cocaine and methylamphetamine. He was discharged on oral calcium-channel blocker and dual antiplatelet therapy and the cardiac rehabilitation was uneventful.

Three months later he developed severe right hand ischemia due to extensive spastic and thrombotic occlusions of the forearm and finger arteries (Figure 1D, black arrows) refractory to vasodilators, fibrinolytic agents, and endovascular revascularization. Despite fasciotomy (Figure 1E), transradial amputation was required due to extensive necrosis. The vascular histology showed an intimal mononuclear infiltration. A cocaine-associated thromboangiitis obliterans was retained as final diagnosis.

As showed in our case, the cocaine-derived cardiovascular risks are present not only in the consumption period but could occur weeks or months later and should be considered as risk factors for dramatic outcomes.
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KEY WORDS cocaine, hand necrosis, thromboangiitis obliterans, vasospastic angina

FIGURE 1 Images

(A, black arrow) Ostial thrombotic subocclusion of the left anterior descending artery. (B, black arrow) Subocclusion of the previously normal mid-right coronary artery. (C) Intravascular optical coherence tomography confirmed the angiographic suspicion of focal vasospasm. (D, black arrows) Extensive spastic and thrombotic occlusions of the forearm and finger arteries. (E) Fasciotomy of the forearm.