ABSTRACT

Initial visualization of only the left circumflex coronary artery during coronary angiography in a 71-year-old patient with prior stenting of the left anterior descending (LAD) coronary artery would have led to an erroneous conclusion of a thrombosed stent and occluded coronary artery with its consequent management problems, before it was disclosed that the LAD originated from a separate ostium.

A 71-year-old gentleman with a history of coronary artery disease was admitted for scheduled coronary angiography due to stable angina class II symptoms and positive thallium scintigraphy. The patient had been submitted to percutaneous coronary intervention 3 years earlier with stenting of the left anterior descending (LAD) coronary artery due to unstable angina and critical coronary stenosis at that time. No recorded imaging was available for review from this previous intervention.

With the first injections into the left coronary artery, only the left circumflex coronary artery was visualized, while it was apparent that the LAD was missing at its origin and only the contour of a stent (arrows) could be discerned along the imaginary course of its proximal segment in both left anterior oblique projections with cranial (Figure 1, panel A) and caudal (panel B) angulations. The right coronary artery was patent (not shown). An initially presumed occlusion of the LAD did not entirely fit the clinical scenario of this patient particularly in the absence of collaterals to the LAD noted during repeated contrast injections into the right coronary artery and delayed cine-angiographic views obtained for this purpose. Thus, the angiographer made further attempts to localize the missing LAD and he was finally successful to engage a separate LAD ostium at the left sinus of Valsalva in juxtaposition to the ostium of the left circumflex coronary artery, revealing a patent LAD and non-occluded stent with no significant restenosis (short arrows, panels C and D).

CONFLICT OF INTEREST: None declared
thrombosed stent and occluded LAD, leading to management decisions which would not have been appropriate. An important clue of a non-occluded LAD was the absence of collateral vessels from the right coronary artery to the LAD. Of course, the simplest way to a correct approach to this patient would have been the review of the previous coronary angiogram, but this information was unavailable. However, when coronary angiography is performed for the first time, in a good percentage of cases there are technical difficulties in cannulating the separate ostia and adequately visualizing both coronary arteries even with use of several different types of catheters and assistance from experienced operators. Key to all this is, of course, an adequate suspicion of a coronary anomaly in order to embark on a search expedition, otherwise serious clinical and surgical problems may ensue. Nowadays, another way to approach such difficult cases of an absent coronary artery and avoid prolonged or repeated catheterizations would be to resort to computed tomography (CT) coronary angiography (CTA), which is a promising new noninvasive modality to correctly diagnose anatomic variations and anomalies. Technical advances in this field promise to reduce the radiation exposure that this method entails.

REFERENCES