We present the case of a 66-year-old man with coronary risk factors (hypertension and hyperlipidemia) and a history of anterior myocardial infarction. He was asymptomatic. The patient underwent a follow up stress test in which he completed seven minutes. The clinical test findings were negative, but the electrical findings were positive and coronary arteriography was requested. The hemodynamic study showed severe left ventricular anterolateral wall hypokinesia, but with preserved ejection fraction of 67%. Left coronary arteriography showed subtotal occlusion of the middle third of the left anterior descending artery, with acceptable filling of the distal bed by collateral vessels originating in the right coronary artery. An image consistent with a cleft was apparent at the beginning of the distal third of the right coronary artery, just after a bend in the artery and only visible on the left anterior oblique view (Figure 1A). Insertion of a coronary pressure guidewire was performed to clarify the inconclusive image which suggested a coronary artery kink or a permanent lesion. As the guidewire advanced, the curve and the distalmost third of the right coronary were straightened and the image disappeared (Figure 1B). Subsequent measurement of the fractional flow reserve was normal (FFR=1).

Images of coronary artery kinks that form after bends or tortuous segments are sometimes difficult to assess and to differentiate from cleft-type lesions. Coronary flow reserve measurement may be necessary to determine whether or not the lesion is significant. At times, simple straightening of the segment with the guidewire suffices to clarify the doubts, as occurred in the case presented.

José R. López-Mínguez, Reyes González, and Manuel Doblado
Servicio de Cardiología, Hospital Universitario Infanta Cristina, Badajoz, Spain.

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Fig. 1.

Coronary Fold Resembling Slit-Like Lesion