

Peer Review File

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The authors present as “Image in Clinical Medicine” a case of type 2a spontaneous coronary artery dissection, assessed through IVUS. They adeptly highlight the complex management of this medical condition and its differential diagnosis. SCAD presents a significant challenge, especially in terms of acute management in the Cath lab. In this context, the presented case and some concluding remarks could be both interesting and relevant.

However, there are a few issues that need attention:

1. As the authors mention, 'Expressing concerns about the possibility of spontaneous coronary artery dissection (SCAD) rather than traditional atherosclerosis with plaque rupture, the interventional cardiologist proceeded with intravascular ultrasound (IVUS)...' It would be helpful to emphasize that these concerns arose in a seemingly healthy woman, without conventional cardiovascular risk factors. This clarification would reinforce the message that the authors are trying to convey.

2. Afterward, the authors note that a conservative management approach was adopted due to the patient's mild symptoms and stable hemodynamics. It would be beneficial to provide further details explaining why conservative treatment was chosen. Specifically, discussing whether ST-elevation was resolved before this decision, any ongoing signs of ischemia (even mild, persistent chest pain during acute ST-segment elevation could warrant percutaneous revascularization), and the patient's post-catheterization evolution, including the need (or not) for a new catheterization due to recurrent angina or early readmission for new ACS, would be valuable. This additional information would offer a more comprehensive understanding of the patient's condition and the reasoning behind the chosen management approach.

3. In this regard, in my view, it's crucial to emphasize the conservative management of most SCAD cases, as demonstrated in the authors' case. However, it's important to carefully assess ongoing ischemic symptoms and signs of hemodynamic instability, which may necessitate emergent or urgent percutaneous revascularization.

4. In addition to the authors' important final remark, it's worth noting that the general expert consensus suggests that for most SCAD patients, angiographic diagnosis is sufficient. In cases where a conservative approach is feasible, minimizing coronary instrumentation is recommended. However, when there is diagnostic uncertainty or the need for coronary intervention, careful intracoronary imaging can be both useful and safe. I would suggest including this consideration.

5. Regarding the figure:

- The ECG indicates ST elevation in inferior leads and marked reciprocal ST depression in

anteroseptal leads, suggesting posterior wall involvement. Further description of the ECG is recommended.

- How were the LM, LAD, and Cx? Consider adding an image to confirm the absence of lesions, thus ruling out multivessel SCAD, which, while not common, occurs in almost 15% of patients in some series.
- If allowed by the editors, including illustrative