CARDIOVASCULAR FLASHLIGHT

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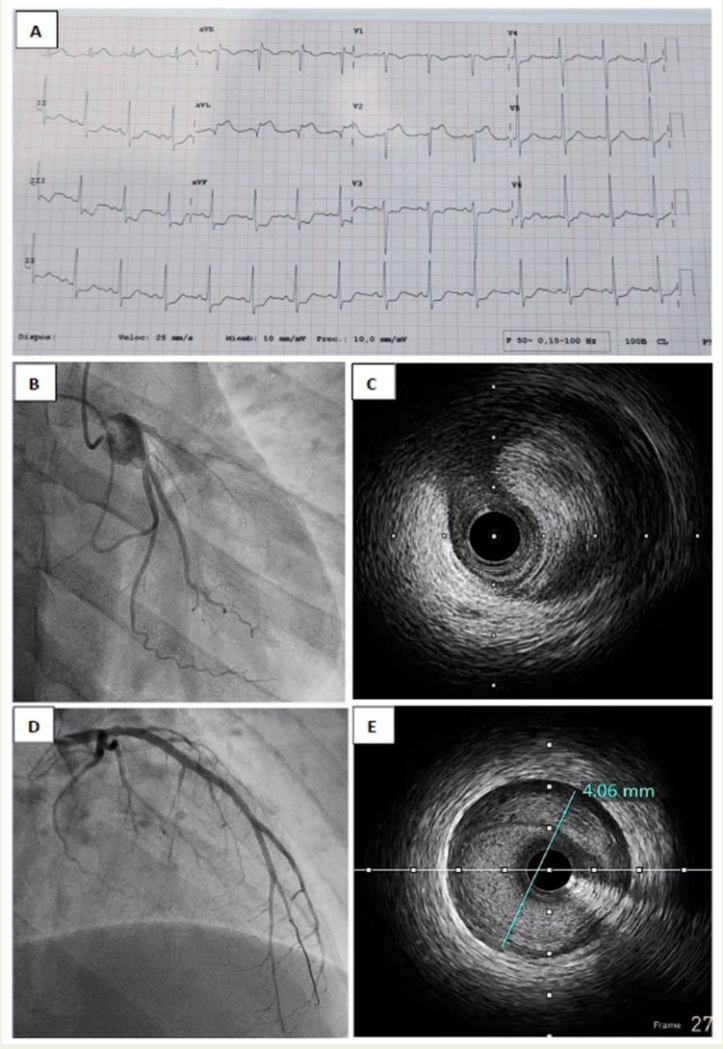
Traumatic coronary artery dissection with total occlusion of left descending coronary artery: to stent or not to stent

Maria Abellas-Sequeiros , Ana Pardo Sanz , Angel Sanchez-Recalde, and Marcelo Sanmartin-Fernandez *

Servicio de Cardiologia, Hospital Universitario Ramon y Cajal, Carretera de Colmenar Viejo, 9100, CP 28034, Madrid, Spain
*Corresponding author. Tel: (+34) 913368957, Email: msanfer@me.com

A 21-year-old man was admitted at the Emergency Department after a motorcycle accident with frontal crash into a tree. A computerized tomography scan confirmed Le Fort III fracture, hepatic laceration, and haemoperitoneum. An electrocardiogram was performed as part of the initial evaluation, showing ST-segment elevation in leads I, aVL, V1, and V2, with ST depression in inferior leads (*Panel A*). The patient denied chest pain. Transthoracic echocardiogram showed septal hypokinesia, with preserved ejection fraction. Troponin was positive (Tn I 20.2 ng/mL). Coronary angiography was performed, showing ostial left anterior descending artery occlusion (*Panel B* and Supplementary material Online, *Video S1*), with Rentrop 2 coronary collaterals. Intravascular ultrasound (IVUS) interrogation revealed an occlusive coronary dissection with thrombosis of the false lumen (*Panel C* and Supplementary material Online, *Video S2*). Considering the mechanism of the occlusion, the total length of the occluded segment and the potential bleeding risk associated to the fractures and liver laceration, a free-stent strategy was chosen, in order to avoid dual antiplatelet therapy. Accordingly, a cutting balloon 3 × 10 mm was advanced through the occlusion and several inflations at 6–8 atm were performed, restoring TIMI III flow (*Panel D* and Supplementary material Online, *Video S3*). The proximal vessel was treated with an AngioSculpt balloon 3.5 × 15 mm. Post-IVUS pullback showed good luminal area of the true lumen (*Panel E* and Supplementary material Online, *Video S4*).



Supplementary material is available at *European Heart Journal* online.

Conflict of interest: The authors have submitted their declaration which can be found in the article Supplementary Material online.