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Michele Galasso MD Isidoro Pera MD Martina Milani MD Andrea Farina MD Gianluca Tiberti MD Silvia Massaro MD Giuseppe Uccello MD



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Disseção Recorrente da Artéria Coronária Esquerda com Extensão para o Tronco Comum e Choque Cardiogênico

Recurrent dissection of left coronary artery with extension to the left main and cardiogenic shock

Michele Galasso^{a,b}, MD, Isidoro Pera^b, MD, Martina Milani^b, MD, Andrea Farina^b, MD, Gianluca Tiberti^b, MD, Silvia Massaro^b, MD, Giuseppe Uccello^b, MD

- a) School of Medicine and Surgery, Milano-Bicocca University, Milan, Italy.
- b) Cardio-Thoracic-Vascular Department, Division of Cardiology, ASST Manzoni, Lecco, Italy.

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Address for correspondence:

Michele Galasso, MD

School of Medicine and Surgery, Milano-Bicocca University.

Piazza dell'Ateneo Nuovo, 1, 20126, Milan, Italy

Phone: +39 3343527963

Email: m.galasso7@campus.unimib.it

Key Words:

Spontaneous coronary artery dissection (SCAD), ST-elevation myocardial infarction (STEMI), Intra-Aortic Balloon Pump (IABP), Cardiogenic shock, Complex Percutaneous Coronary Intervention, Coronary Embolization.

Case

A 42-year-old female arrived at our hospital with epigastric pain: electrocardiogram (EKG) was negative and echocardiography normal, but troponin levels were elevated. Coronary angiography revealed a spontaneous dissection of the distal left anterior descending artery (LAD) - Type 2b according to the Yip-Saw classification^{1,2}. No angioplasty was performed, and she was discharged on aspirin. Two days later, she was readmitted for a large anterior ST elevation myocardial infarction; the first point of high-sensitivity troponin I (hs-TnI) was 5000 ng/L, prompting an urgent coronary angiography. This showed occlusion of the ostial LAD and wall hematoma, extending proximally to the left main artery (**Figure 1; Supplementary video 1**). We pre-dilated the LAD, resulting in occlusion of the vessel and the diagonal branch, thus precipitating cardiogenic shock, requiring noradrenaline. Stenting of LAD and left main artery was then performed; the diagonal branch remained occluded, with evidence of circumflex coronary (CX) thrombosis and upstream of the stent in the left main (LM) (Figure 2). Due to persistent cardiogenic shock, an intra-aortic balloon pump (IABP) was inserted. Intravascular ultrasound revealed stent malapposition, necessitating post-dilation in the diagonal branch (**Supplementary video 2**). A small iatrogenic perforation in a distal septal branch required a microcoil insertion (**Figure 2; Supplementary video 3**). The post-percutaneous coronary intervention echo revealed akinesia of the apex and anterior wall with reduced left ventricular ejection fraction (35%). The patient was transferred to cardiovascular intensive care with weaning from vasopressors and IABP in one day. A cerebral magnetic resonance to exclude fibromuscular dysplasia was negative. A pre-discharge coronary angiography showed residual occlusion of the distal LAD and complete recanalization of Cx (**Figure 3; Supplementary video 4**); in a few days ventricular function was fully recovered. The patient was successfully discharged after ten days in good clinical condition with the following home therapy: Cardio Aspirin, clopidogrel, bisoprolol, pantoprazole, atorvastatin/ezetimibe².

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Disclosures: none

Ética de la publicación

1. ¿Su trabajo ha comportado experimentación en animales?:

No

2. ¿En su trabajo intervienen pacientes o sujetos humanos?

Sí

Si la respuesta es afirmativa, por favor, mencione el comité ético que aprobó la investigación y el número de registro.:

si

Si la respuesta es afirmativa, por favor, confirme que los autores han cumplido las normas éticas relevantes para la publicación. :

Sí

Si la respuesta es afirmativa, por favor, confirme que los autores cuentan con el consentimiento informado de los pacientes. :

Sí

3. ¿Su trabajo incluye un ensayo clínico?:

No

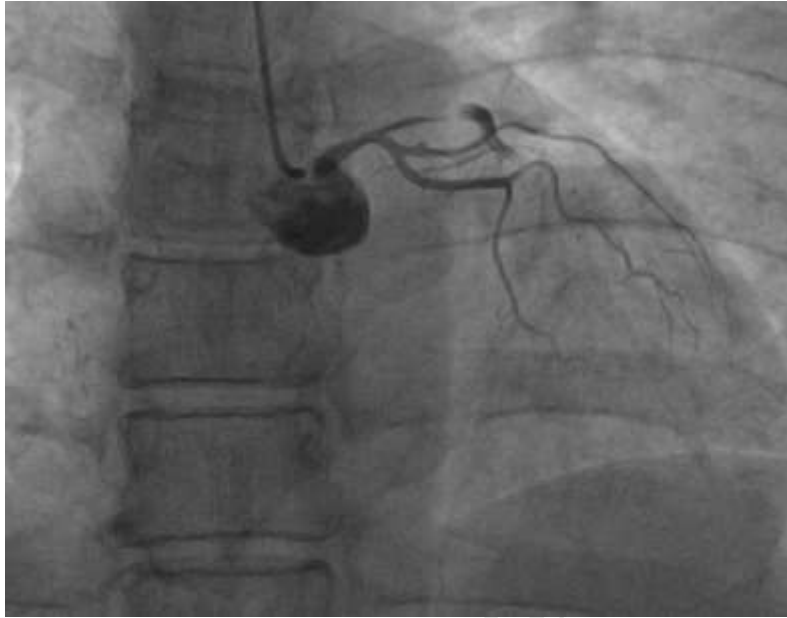
Non è una sperimentazione clinica

4. ¿Todos los datos mostrados en las figuras y tablas incluidas en el manuscrito se recogen en el apartado de resultados y las conclusiones?:

Sí

References:

- 1) Adlam D, Alfonso F, Maas A, et al.; Writing Committee. European Society of Cardiology, acute cardiovascular care association, SCAD study group: a position paper on spontaneous coronary artery dissection. Eur Heart J. 2018 Sep 21;39(36):3353-3368. doi: 10.1093/eurheartj/ehy080. PMID: 29481627; PMCID: PMC6148526.
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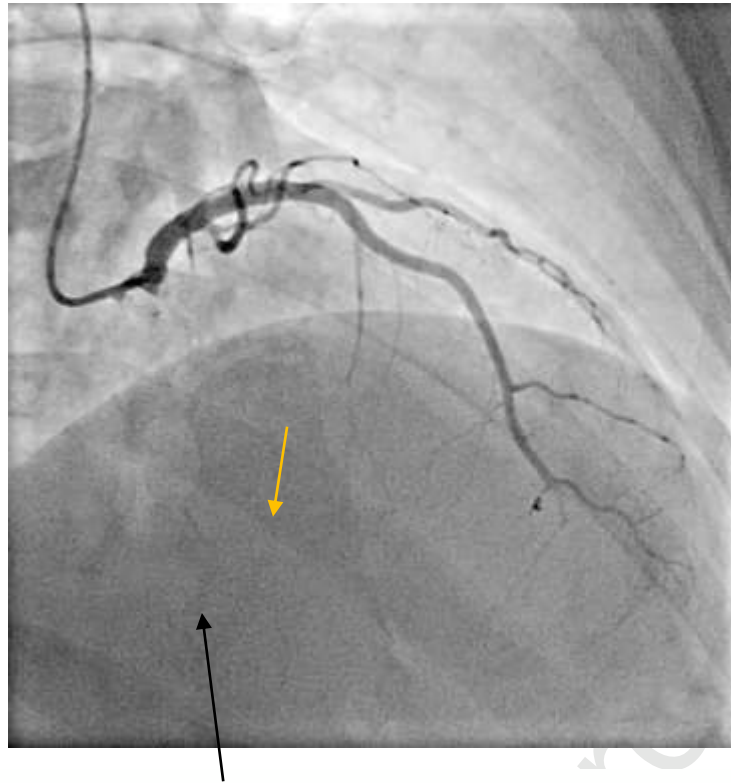


Figures:



Figure 1: Coronary angiography showed occlusion of the ostial left anterior descending artery due to wall hematoma, extending proximally and affecting the mid-distal left main artery (black arrow).

Figure 2: showing thrombosis and in the left main rupture of a arrow), with a microcoil



Coronary angiography circumflex coronary upstream of the stent (orange arrow) and septal branch (black arrow) effectively treated (blue arrow).

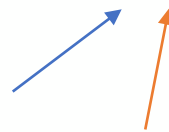
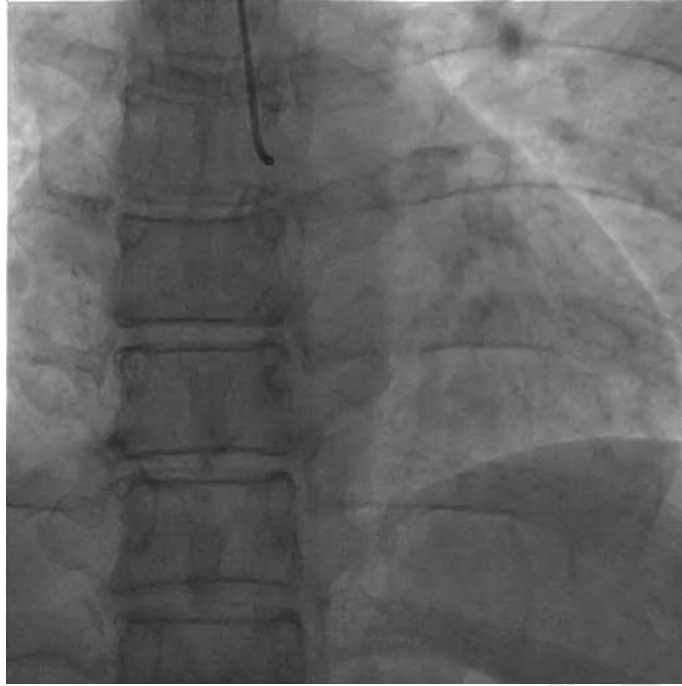
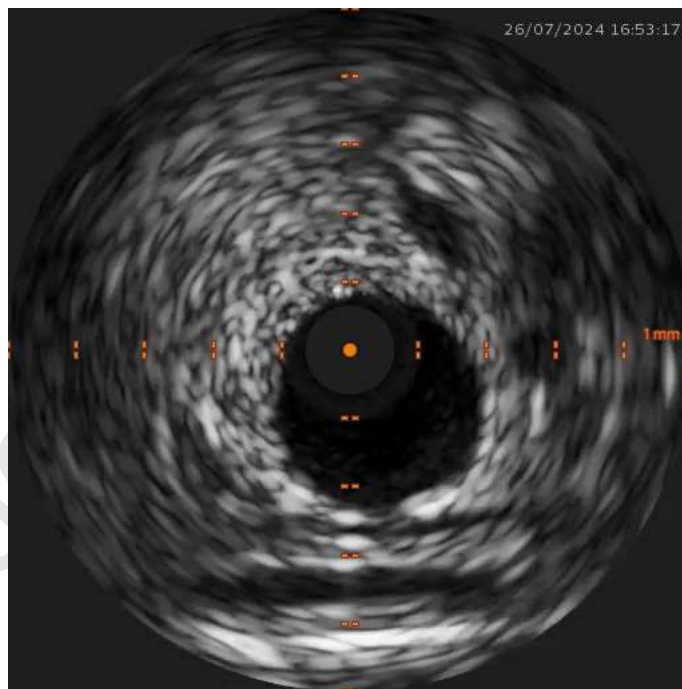


Figure 3: Pre-discharge coronary angiography showing a completely occluded distal left anterior descending artery (LAD) (orange arrow), good angiographic result of the previous ostial LAD stent (yellow arrow), excellent coil retention (blue arrow) in the septal artery, and complete resolution of the thrombosis in the circumflex artery (black arrow).

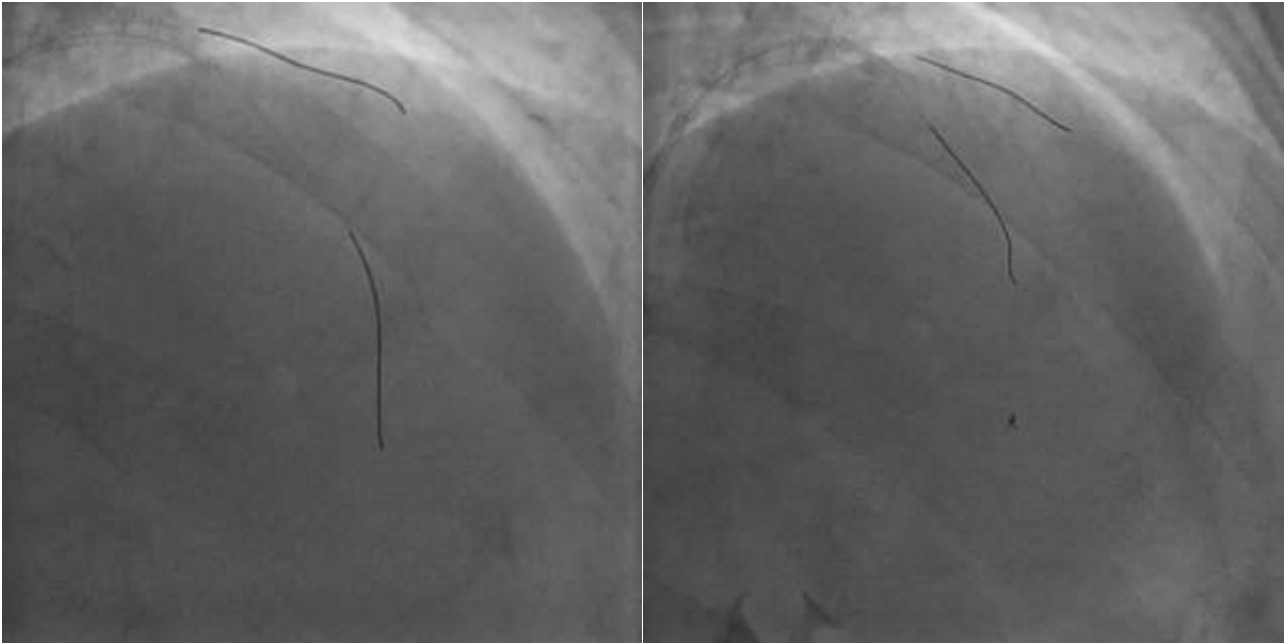




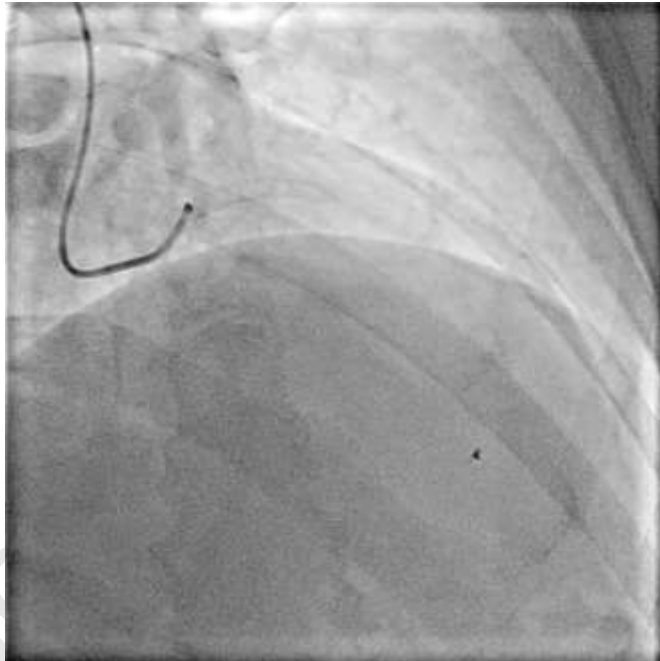
Supplementary video 1



Supplementary video 2.



Supplementary video 3.



Supplementary video 4.