

# ST-segment elevation myocardial infarction after COVID-19 reinfection: The disseminated thrombotic process

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A 64-year-old man with no medical history of coronary events was admitted due to a diagnosis of myocardial infarction with prominent ST-segment elevation. He suffered from coronavirus disease 2019 (COVID-19) 7 weeks prior (with a subsequent negative test) as well as arterial hypertension, type 2 diabetes, and obesity. Upon admission, the PCR SARS-CoV-2 screening test was positive anew. Coronary angiography showed a thrombus in the left main (LM) coronary artery with 90% stenosis (Fig. 1A–D). Distal segments of the left anterior descending (LAD) artery and diagonal branch (Dg) were occluded by thromboembolic material. After an intracoronary bolus of eptifibatid, thrombectomy, and balloon angioplasty in LAD, the operator decided to proceed with drug-eluting stent implantation (Fig. 1E, F). In LM, an intervention was completed without residual stenosis with Throm-

bolysis in Myocardial Infarction (TIMI) 3. The distal segment of LAD and Dg remained TIMI 1 and 0, respectively. Thoracic computed tomography demonstrated specific pulmonary changes (Fig. 1G). An echocardiogram showed a left ventricle (LV) ejection fraction of 44% and a thrombus in the LV apex (Fig. 1H, I; **Suppl. Video 1**). Notably, there was no atrial fibrillation in the past. On discharge, the patient was prescribed warfarin (international normalized ratio 2.0–2.5) with acetylsalicylic acid, and ticagrelor for 3 and 12 months, respectively. A 3-month follow-up revealed no recurrence of COVID-19 and cardiovascular events. The control echocardiography showed dissolution of the LV thrombus; therefore, warfarin therapy was discontinued.

Herein, we present an elegant case reflecting the potential need for an aggressive antithrombotic treatment during and after COVID-19.

**Conflict of interest:** None declared

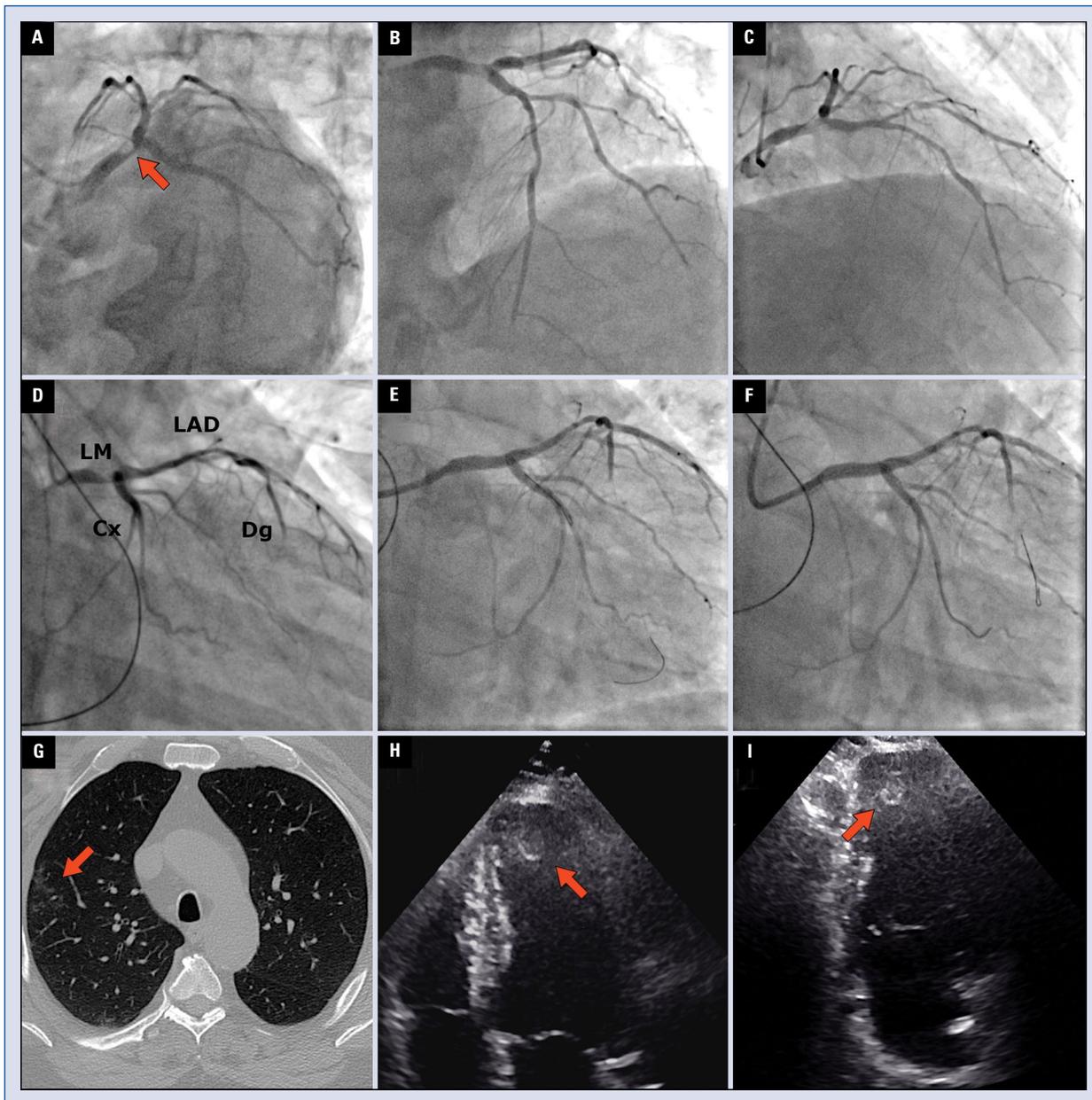
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**Figure 1.** A–D. Thrombus in the left main coronary artery (LM; arrow) and occlusion of the distal left anterior descending artery (LAD) and diagonal branch (Dg); E. Direct stenting technique in the LM; F. Proximal optimization of the stent in the LM; G. Specific for COVID-19 interstitial post-inflammatory changes (arrow) in the lungs; H, I. Thrombus (17 mm × 10 mm; arrow) in the apex of the left ventricle visualized in both apical 4- and 2-chamber view of transthoracic echocardiography; Cx — circumflex artery.